

## DISASSEMBLY OF VIDEOCIPHER II V2.4 EPROM

(PRINTED 9/21/86)

Part 1

ADDRESSES	LABEL	INSTRUCTION	COMMENTS
DECIMAL			
0	VALUE1	84	;EPROM LOADS AT C000, ADD C000 TO HEX
1	1	77	;BYTES 0 AND 1 ARE CHECKSUM VALUES.
2	2	MOV R08,B	;REFERENCED IN TABLES 18/19*****
4	4	LDA #6022(B)	
7	7	CMPA #61E7	;DIRECT COMPARISON
10	A	JNZ/JNE 14	;TO 20 (RETS)
12	C	LDA #6023(B)	
15	F	CMPA #6247	;DIRECT COMPARISON
18	12	JNZ/JNE OC	;TO 20 (RETS)
20	14	MOVW %628E,R48	
24	18	LOOP18	
26	1A	ADD %02,B	
29	1D	CALL #C079	;READ TABLE2
32	20	CALL #C106	;UNTIL DONE
35	23	BR #F38A	;GOTO SUB338A (RETS)
37	25	MOV R08,B	;REFERENCED IN TABLES 18/19*****
40	28	LDA #6002(B)	
43	2B	CMPA #6247	;DIRECT COMPARISON
45	2D	JNZ/JNE 1D	;GOTO SUB338A (RETS)
48	30	LDA #6004(B)	
50	32	JZ/JEQ 1B	;GOTO SUB338A (RETS)
53	33	CMPA #6233	;DIRECT COMPARISON
55	37	JNZ/JNE 13	;GOTO SUB338A (RETS)
57	39	MOV %FF,A	
60	3C	STA #628D	
63	3F	CALL #F3C5	;GOSUB SUB33C5 (CHECK IF VC2 CHANNEL AND IF AUTH)
67	43	MOVW %61E4,R48	
70	46	CALL #C116	;GOSUB SUB116
71	47	CLR A	
74	4A	STA #628D	
77	4D	BR #F38A	;GOTO TO SUB338A (RETS)
80	50	CMP %47,R20	;REFERENCED IN TABLES 18/19*****
82	52	JNZ/JNE FB	;TO JUMP TO 4A (LOOP)
84	54	MOV R08,B	
87	57	LDA #6024(B)	
90	5A	CMPA #6247	;DIRECT COMPARISON
92	5C	JNZ/JNE EE	;TO 4A (LOOP)
96	60	MOVW %630F,R48	
99	63	BR #C018	;GOTO LOOP18
102	66	ADD %02,R48	
105	69	ADC %00,R47	
107	6B	LDA #R48	
110	6E	STA #6282	
112	70	MOV R47,A	
115	73	STA #6283	
117	75	MOV R48,A	
120	78	STA #6284	
121	79	RETS	;-----<<<
123	7B	SUB079	
125	7D	LDA #R48	
128	80	MOV B,R08	
130	82	CMPA #6000(B)	
132	84	JNZ/JNE E1	;TO 63 (LOOP)
135	87	INC R48	
137	89	ADC %00,R47	
139	8B	INC R48	
142	8E	TSTA/CLRC	;SET C,N,Z BITS
143	8F	JZ/JEQ 15	;JUMP TO A6
145	91	LDA #6001(B)	
148	94	AND %03,A	
150	96	MOV R,A,B	
151	97	LDA #C16C(B)	;LOOKUP TABLE2
154	9A	STA #R48	
156	9C	CLR A	;A=0, BITS C+N=0, Z=1
157	9D	DEC D R48	
159	9F	STA #R48	
161	A1	INC R48	
163	A3	ADC %00,R47	
166	A6	MOV R08,B	
168	AB	LDA #6001(B)	
171	AB	MOV A,B	
172	AC	RR B	
173	AD	RR B	
174	AE	AND %03,B	
176	B0	MOV B,ROA	
178	B2	LDA #C164(B)	;LOOKUP TABLE1
181	B5	MOV A,B	
182	B6	LDA #R48	
184	B8	BTJZ B,A,B1	;TO 6B (LOOP)
186	BA	XOR %FF,B	
188	BC	AND B,A	
189	BD	STA #6282	
192	C0	MOV R47,A	
194	C2	STA #6283	
197	C5	MOV R48,A	
199	C7	STA #6284	
202	CA	MOV R08,B	
204	CC	LDA #6020(B)	
207	CF	INC R48	
209	D1	ADC %00,R47	
212	D4	STA #R48	
214	D6	LDA #6021(B)	
217	D9	INC R48	
219	DB	ADC %00,R47	
222	DE	STA #R48	
224	E0	INC R48	
226	E2	ADC %00,R47	
229	E5	MOV ROA,A	
231	E7	MOV A,B	
232	E8	RL B	
233	E9	SWAP B	
234	EA	SUB R00,B	
236	EC	ADD R01,R48	
239	EF	ADC %00,R47	
242	F2	MOV R08,B	
244	F4	MOV %1F,POA	
247	F7	LDA #6001(B)	
250	FA	STA #R48	
252	FC	INC B	
253	FD	INC R48	
255	FF	ADC %00,R47	
258	102	DJNZ ROA,F2	;TO F7 (LOOP)
261	105	RETS	;-----<<<
262	106	SUB106	
265	109	LDA #6283	
267	10B	MOV A,R47	
270	10E	LDA #6284	
272	110	MOV A,R48	
275	113	LDA #6282	
277	115	STA #R48	
278	116	RETS	;-----<<<
279	117	SUB116	
281	119	CLR B	;B=0 BITS A+N=0, Z=1
284	11C	CLR ROA	
287	11F	ADD %00,R48	
289	121	ADC %00,R47	
291	123	LDA #R48	
293	125	JPI/JGE 02	;JUMP TO 125
296	128	MOV %63,B	
299	12B	MOV %07,POA	
302	12E	SUB %07,R48	
304	130	BBB %00,R47	
		LDA #R48	
		MOV A,ROB	

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(JS-1)

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306 132 LDA #6107(B)
309 135 AND R00,R0B
312 138 OR R0B,R0A
315 13C INC B
316 13E INC R48
318 13E ADC #00,R47
321 141 DJNZ R09,EA ;JUMP TO 12E (LOOP)
324 144 MOV R0A,A
326 146 JNZ/JNE 05 ;JUMP TO 14A
328 148 INC R48
330 14A ADC #00,R47
333 14D LDA #R48
335 14F CMPA #628E ;DIRECT COMPARISON
338 152 JNZ/JNE 01 ;BYPASS RETS (IF NOT DONE)
340 154 RETS ;<-----<<
341 155 MOV %FF,B
343 157 XCHB A
344 158 STA #628F
347 159 MOV B,A
348 15C STA #628E
351 15F CLR A
352 160 STA #628B
355 163 RETS ;<-----<<
356 164 TABLE1 01,02,04,08,10,20,40,80
364 16C TABLE2 01,03,07,0F,1F,3F,7F,FF
372 174 OR %20,R20
375 177 MOV %FF,P17
379 17B CALL #FC0A ;GOSUB SUB3COA
381 17D MOV %00,A
383 17F TRAP-6
384 180 MOV R0E,B
386 182 SUB %02,B
388 184 TRAP-10
389 185 ADD %01,B
391 187 LDA #60FF(B)
394 18A MOV A,R24
396 18C INC B
397 18D LDA #60FF(B)
400 190 MOV A,R23
402 192 INC B
403 193 MOVD %60FF(B),R35
407 197 MOV %04,P10
410 19A TRAP-7
411 19B TRAP-8
412 19C MOV %01,A
414 19E TRAP-6
415 19F TRAP-8
416 1A0 MOV %02,A
418 1A2 TRAP-6
419 1A3 MOVD %6200,R35
423 1A7 MOV %07,P10
426 1AA TRAP-7
427 1AB TRAP-8
428 1AC MOV %03,A
430 1AE TRAP-6
431 1AF MOVD %6207,R35
435 1B3 MOV %0B,P10
438 1B6 TRAP-7
439 1B7 TRAP-8
440 1B8 MOV %09,A
442 1B9 TRAP-6
443 1BB LDA #6246
446 1BE TRAP-6
447 1BF TRAP-8
448 1C0 MOV %07,A
450 1C2 TRAP-6
451 1C3 CLR B ;B=0
452 1C4 TRAP-11 ;GET SERIAL NUMBER ROUTINE (12 DIGITS WORTH OF IT)
453 1C5 STA #623A(B)
456 1C8 INC B
457 1C9 CMP %0C,B
459 1CB JNZ/JNE F7 ;TO 1C4 (LOOP)
461 1CD CLR A ;A=0
462 1CE STA #622B
465 1D1 AND %DF,R20
468 1D4 BR #F99B ;GOTO TO SUB399B
471 1D7 CLR R09 ;REFERENCED IN TABLES 1B/19*****88888888
473 1D9 JMP 03 ;JUMP TO 1DE
475 1DB 1DB MOV %63,P09 ;REFERENCED IN TABLES 1B/19*****88888888
478 1DE 1DE MOV R0B,B
480 1E0 LDA #6233
483 1E3 JZ/JEQ 05 ;TO 1EA
485 1E5 CMPA #6002(B)
488 1E8 JZ/JEQ 0A ;JUMP TO 1F4
490 1EA 1EA CLR A ;A=0
491 1EB STA #615F
494 1EE STA #61C2
497 1F1 BR #F38A ;GOTO SUB338A (RETS)
500 1F4 1F4 MOV A,R0A
502 1F6 LDA #6003(B)
505 1F9 MOV A,R0B
507 1FB MOV R07,B
509 1FD CMPA #615E(B)
512 200 JNZ/JNE 07 ;TO 209
514 202 MOV R0A,A
516 204 CMPA #615F(B)
519 207 JZ/JEQ 11 ;TO 21A
521 209 209 CLR A ;A=0
522 20A STA #6160(B)
525 20D STA #6161(B)
528 210 MOV R0A,A
530 212 STA #615F(B)
533 215 MOV R0B,A
535 217 STA #615E(B)
538 21A MOV %05,B
540 21C 21C LDA #61FB(B)
543 21F JNZ/JNE 05 ;TO 226
545 221 DJNZ B,F9 ;TO 21C (LOOP)
547 223 BR #C2D0 ;GOTO SUB2D0
550 226 MOV R0B,R0D
553 229 ADD %05,R0D
556 22E MOV R0D,B
558 22E LDA #6005(B)
561 231 HPY R00,A
563 233 MOVD R01,R4A
566 236 LDA #61FC
569 239 SWAP A
570 23A AND %0F,A
572 23C MOV A,R0A
574 23E LDA #61F9
577 241 MOV A,R0B
579 243 MOV R0D,B
581 245 LDA #6003(B)
584 248 SWAP A
585 249 AND %0F,A
587 24B MOV A,R0C
589 24D LDA #6000(B)
592 250 SUB R0B,A
594 252 SBB R0A,R0C
597 255 JPZ/JSE 07 ;TO 25E
599 257 INV A

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600 25B INV ROC
602 25A INC A
603 25B ADC Z00,ROC
605 25E JNZ/JNE 74 ;TO 2D4
608 260 MPY R00,A
610 262 SUB R01,R4A
613 265 SBB R00,R49
616 268 JNC/JL 6A ;TO 2D4
618 26A LDA #61FC
621 24D AND ZOF,A
623 26F MOV A,ROA
625 271 LDA #61FA
628 274 MOV A,ROB
630 276 MOV R0D,B
632 278 LDA #6003(B)
635 27B AND ZOF,A
637 27D MOV A,ROC
639 27F LDA #6001(B)
642 282 SUB R0B,A
644 284 SBB ROA,ROC
647 287 JPF/JGE 07 ;TO 2D0
649 289 INV A
650 28A INV ROC
652 28C INC A
653 28D ADC Z00,ROC
655 290 JNZ/JNE 42 ;TO 2D4
658 292 MPY R00,A
660 294 SUB R01,R4A
663 297 SBB R00,R49
665 29A JNC/JL 38 ;TO 2D4
668 29C LDA #61FD
671 29F SWAP A
672 2A0 AND ZOF,A
674 2A2 MOV A,ROA
676 2A4 LDA #61FB
679 2A7 MOV A,ROB
681 2A9 MOV R0D,B
683 2AB LDA #6004(B)
686 2AE SWAP A
687 2AF AND ZOF,A
689 2B1 MOV A,ROC
691 2B3 LDA #6002(B)
694 2B6 SUB R0B,A
696 2B8 SBB ROA,ROC
699 2BB JPF/JGE 07 ;TO 2D4
701 2BD INV A
702 2BE INV ROC
704 2C0 INC A
705 2C1 ADC Z00,ROC
708 2C4 JNZ/JNE 0E ;TO 2D4
710 2C6 MPY R00,A
712 2C8 SUB R01,R4A
715 2CB SBB R00,R49
718 2CE JNC/JL 04 ;TO 2D4
720 2D0 CLR ROC
722 2D2 JMP 12
724 2D4 2D4 MOV R0D,B
726 2D6 ADD Z05,B
728 2D8 MOV B,ROD
730 2DA SUB R0B,B
732 2DC CMP Z23,B
734 2DE JZ/JEQ 03 ;JUMP TO 2E3 (BYPASS LOOP22C)
736 2E0 BR @C22C ;GOTO LOOP22C
739 2E3 MOV XFF,POC
742 2E6 MOV ROB,B
744 2E8 LDA #6004(B)
747 2EB MOV A,ROB
749 2ED MOV R09,B
751 2EF LDA #6160(B)
754 2F2 OR ROB,
756 2F4 STA #6160(B)
759 2F7 LDA #6161(B)
762 2FA MOV ROC,ROC
765 2FD JNZ/JNE 06 ;TO 305
767 2FF INV ROB
769 301 AND ROB,A
771 303 JMP 02 ;TO 307
773 305 305 OR ROB,A
775 307 STA #6161(B)
778 30A BR #F38A ;GOTO SUB338A (RETS)
781 30D MOV Z0A,P10
784 310 JMP 0B ;JUMP TO SUB31D
786 312 CLR B ;B=0
787 313 MOV Z28,P10
790 316 JMP 05 ;JUMP TO SUB31D
792 318 002 MOV ZAO,B
794 31A SUB31A MOV X05,P10
797 31D SUB31D XCHB R3C
799 31F LDA #R35
801 321 MOV A,B
802 322 INC R35
804 324 ADC Z00,R34
807 327 LDA #R35
809 329 AND ZFO,A
811 32B RRC B
812 32C RRC A
813 32D RRC B
814 32E RRC A
815 32F XCHB A
816 330 XCHB R3C
818 332 TRAP-12
819 333 MOV R3C,A
821 335 JMP 1B ;JUMP TO 352
823 337 SUB337 LDA #R35
825 339 MOV A,B
826 33A INC R35
828 33C ADC Z00,R34
831 33F LDA #R35
833 341 AND ZFO,A
835 343 RRC B
836 344 RRC A
837 345 RRC B
838 346 RRC A
839 347 XCHB A
840 348 DRP Z02,P06
843 34B STA #2000
846 34E ANDP ZFD,P06
849 351 MOV B,A
850 352 RR A
851 353 RR A
852 354 DRP Z02,P06
855 357 STA #2000
858 35A ANDP ZFD,P06
861 35D LDA #R35
863 35F MOV A,B
864 360 AND ZOF,B
866 362 INC R35
868 364 ADC Z00,R34
871 367 LDA #R35
873 369 RL A
874 36A RLC B

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875 36B  
 876 36C  
 877 36D  
 878 36E  
 881 371  
 884 374  
 887 377  
 889 379  
 891 37B  
 894 37E  
 897 381  
 900 384  
 902 386  
 905 389  
 908 38C  
 909 3BD  
 912 390  
 914 392  
 917 395  
 918 396  
 919 397  
 920 398  
 923 39B  
 925 39D  
 927 39F  
 928 3A0  
 930 3A2  
 931 3A3  
 933 3A5  
 934 3A6  
 935 3A7  
 938 3AA  
 941 3AD  
 944 3B0  
 946 3B2  
 948 3B4  
 949 3B5  
 951 3B7  
 953 3B9  
 955 3BB  
 956 3BC  
 957 3BD  
 958 3BE  
 960 3C0  
 962 3C2  
 965 3C5  
 967 3C7  
 969 3C9  
 972 3CC  
 975 3CF  
 976 3D0  
 979 3D3  
 980 3D4  
 983 3D7  
 988 3DC  
 991 3DF  
 993 3E1  
 995 3E3  
 997 3E5  
 1000 3EB  
 1002 3EA  
 1004 3EC  
 1008 3EE  
 1009 3F1  
 1011 3F3  
 1014 3F6  
 1017 3F9  
 1020 3FC  
 1021 3FD  
 1024 400  
 1026 402  
 1029 405  
 1031 407  
 1034 40A  
 1036 40C  
 1039 40F  
 1040 410  
 1043 413  
 1044 414  
 1047 417  
 1049 419  
 1052 41C  
 1055 41F  
 1056 420  
 1059 423  
 1062 426  
 1066 42A  
 1067 42B  
 1068 42C  
 1071 42F  
 1073 431  
 1075 433  
 1077 435  
 1080 438  
 1084 43C  
 1086 43E  
 1089 441  
 1092 444  
 1095 447  
 1097 449  
 1100 44C  
 1102 44E  
 1104 450  
 1108 454  
 1111 457  
 1115 458  
 1118 45E  
 1121 461  
 1122 462  
 1125 465  
 1128 46B  
 1131 46B  
 1134 46E  
 1138 472  
 1140 474  
 1143 477  
 1147 478  
 1150 47E  
 1153 481  
 1156 484  
 1157 485  
 1160 488  
 1161 489  
 1165 48D  
 1169 491  
 1172 494  
 1174 496  
 1176 498  
 1177 499  
 1180 49C

RL A  
 RLC B  
 MOV B,A  
 ORP X02,P06  
 STA #2000  
 ANDP XFD,P06  
 LDA #R35  
 AND X3F,A  
 ORP X02,P06  
 STA #2000  
 ANDP XFD,P06  
 INC R35  
 ADC X00,R34  
 DJNZ R10,AB ; TO SUB337 (LOOP)  
 RETS ;<-----<<  
 SUB38D MOV %9F,P3B  
 JMP 03 ; JUMP TO 395  
 TRAP-17 MOV ZB3,P3B  
 CLR B  
 SUB396 TRAP-12  
 TRAP-13  
 DJNZ R3B,FC ; TO 397 (LOOP)  
 MOV ZB4,B  
 MOV Z0A,A  
 TRAP-12  
 MOV Z10,A  
 TRAP-13  
 MOV Z70,A  
 TRAP-13  
 RETS ;<-----<<  
 SUB3A7 MOV D R46,R35 ;<-----<<  
 ADD X05,R35  
 ADC X00,R34  
 LDA #R35  
 AND X03,A  
 INC A  
 MOV A,R3B  
 LDA #R35  
 AND X70,A  
 MOV A,B  
 RR A  
 RR A  
 ADD R00,B  
 INC R35  
 ADC X00,R34  
 CMP ZBC,B  
 JZ/JEQ 07 ; TO 3D0  
 CALL @C30D ; GO SUB SUB30D  
 DJNZ R3B,E8 ; TO 3B7 (LOOP)  
 RETS ;<-----<<  
 3B7 CALL @C31A ; GO SUB SUB31A  
 RETS ;<-----<<  
 SUB3D4 MOV X08,P3B ; TO 3DC  
 JMP 03  
 TRAP-18 MOV Z09,P3B  
 988 3DC MOV Z00,P3A  
 991 3DF LDA #R46  
 993 3E1 MOV A,R34  
 995 3E3 INC R46  
 997 3E5 ADC X00,R45  
 1000 3EB MOV Z46  
 1002 3EA MOV A,R35  
 1004 3EC INC R46  
 1008 3EE ADC X00,R45  
 1009 3F1 MOV R3A,B  
 1011 3F3 CALL @C31A ; GO SUB SUB31A  
 ADD X14,R3A  
 1017 3F9 DJNZ R3B,E3 ; TO 3DF (LOOP)  
 RETS ;<-----<<  
 SUB3FD MOV %FF,P2C  
 JMP 0D  
 SUB402 MOV X00,P2C  
 JMP 0B  
 SUB407 MOV %0F,P2C  
 JMP 03  
 SUB40C MOV X7F,P2C  
 POP A  
 STA #6215  
 POP A  
 STA #6216  
 MOV B,R2F  
 MOV Z03,P2D  
 MOV R21,R2E  
 TRAP-21  
 MOV Z0A,P21  
 AND X07,R2F  
 MOVD XE456,R46  
 TRAP-18  
 TRAP-9  
 LDA #6268  
 JN/JLT 3D  
 MOV R2D,A  
 JN/JLT 39  
 MOV Z04,P21  
 MOVD XE18C,R35  
 MOV %BC,B  
 CALL @C30D ; GO SUB SUB30D  
 CALL @C591 ; GO SUB SUB591  
 CALL @C584 ; GO SUB SUB584  
 JNZ/JNE 05  
 MOV %FF,P2D  
 JMP D1  
 MOV %BC,B  
 MOVD XE8A5,R35  
 CALL @C31A ; GO SUB SUB31A  
 MOVD XE1B9,R35  
 CALL @C31B ; GO SUB SUB31B  
 MOV X2D,P42  
 TRAP-9  
 DJNZ R42,FC  
 DJNZ R2D,D0  
 MOV X03,P2D  
 BR #D13B ; GOTO 113B  
 MOVD XE8A5,R35  
 MOV %BC,B  
 CALL @C31A ; GO SUB SUB31A  
 MOVD XE2E5,R35  
 CALL @C31B ; GO SUB SUB31B  
 LDA #6253  
 STA #6253  
 TRAP-19  
 481 CALL @C4C3 ; GO SUB SUB4C3  
 485 TRAP-9  
 BTJZ X01,R19,F8;TO 485 (LOOP)  
 BTJZ X01,R1A,261;TO 487  
 LDA #6255  
 CMP Z0A,A  
 JNZ/JNE 11 ; TO 4A9  
 LDA #6253  
 XCHB A  
 LDA #61C6



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1183 49F AND X07,A
1185 4A1 CMP R00,B
1187 4A3 JC/J8 DF ;TD 484 (LOOP)
1189 4A5 XCHB A
1190 4A6 INC A
1191 4A7 JMP DB ;TO 481 (LOOP)
1193 4A9 4A9 CMP X0B,A
1195 4AB JNZ/JNE D7 ;TO 484 (LOOP)
1197 4AD LDA @6253
1200 4B0 CMP %01,A
1202 4B2 JZ/JEQ DO ;TO 485 (LOOP)
1204 4B4 DEC A
1205 4B5 JMP CA ;TO 481 (LOOP)
1207 4B7 MOV R2E,R21
1210 4B8 LDA @6216
1213 4BD PUSH A
1214 4BE LDA @6215
1217 4C1 PUSH A
1218 4C2 RETS ;<-----<<
1219 4C3 SUB4C3 LDA @622F
1222 4C6 MOV A,R2F
1224 4C8 LDA @622E ;AUTH CODE STORED HERE*****  
*****  
*****
1227 4CB AND X1B,A
1229 4CD MOV A,B
1230 4CE CMP %FF,R2C
1233 4D1 JNZ/JNE OA ;TO 4DD
1235 4D3 TSTB
1236 4D4 JNZ/JNE ZE
1238 4D6 POP A
1239 4D7 POP A
1240 4D8 POP A
1241 4D9 POP A
1242 4DA BR $CCD7 ;JUMP TO SUBCD7 (MIGHT BE TURN ON ROUTINE)
1245 4DD 4DD CMP %7F,R2C
1248 4E0 JNZ/JNE OD ;TO 4EF
1250 4E2 TSTB
1251 4E3 JNZ/JNE 1F
1253 4E5 MOV ROF,B
1255 4E7 TRAP-10
1256 4EB LDA @6113(B)
1259 4EB MOV A,R2F
1261 4ED JMP 15
1263 4EF 4EF MOV R24,B
1265 4F1 TRAP-10
1266 4F2 LDA @6113(B)
1269 4F3 MOV A,R2F
1271 4F7 CMP %00,R2C
1274 4FA JNZ/JNE 05 ;TO 501
1276 4FC CALL @05C7 ;GOSUB SUB15C7
1277 4FF JMP 03
1281 501 501 CALL @05EB ;GOSUB SUB15E8
1284 504 AND X07,R2F
1287 507 MOV %10,B
1289 509 LDA @6253
1292 50C CALL @0617 ;GOSUB SUB1617
1295 50F CMP %00,R1D ;IS AUTH CODE 'M' (MASKED)
1298 512 JZ/JEQ 49
1300 514 CMP %00,R2F
1303 517 JZ/JEQ 44
1305 519 MOV X2B,B
1307 51B MOVD XE2A9,R35
1311 51F CALL $C31A ;GOSUB SUB31A
1314 522 MOV X3B,B
1316 524 MOV R2F,A
1318 526 CALL @0617 ;GOSUB SUB1617
1321 529 MOV X3C,B
1323 52B MOVD XEBA5,R35
1327 52D CALL $C31A ;GOSUB SUB31A
1330 532 MOV X50,B
1332 534 MOVD XEBA5,R35
1336 538 MOVD XEBA5,R46
1340 53C AND XDF,R20
1343 53F LDA @6253
1346 542 CMP R2F,A
1348 544 JC/J8 OB
1350 546 MOVD XE2C7,R35
1354 54A MOVD XE2D6,R46
1358 54E OR %20,R20
1361 551 CALL $C31A ;GOSUB SUB31A
1364 554 MOV %64,B
1366 556 MOVD R46,R35
1369 559 CALL $C31A ;GOSUB SUB31A
1372 55C RETS ;<-----<<
1373 55D CLR R2F
1375 55F MOVD XDEB0,R35
1379 563 MOV X2B,B
1381 565 CALL $C31A ;GOSUB SUB31A
1384 568 MOVD XDEDA,R35
1388 56C MOV X3C,B
1390 56E CALL $C31A ;GOSUB SUB31A
1393 571 MOVD XE8A5,R35
1397 575 MOV X50,B
1399 577 CALL $C31A ;GOSUB SUB31A
1402 57A MOVD XE8A5,R35
1406 57E MOV X50,B
1408 580 CALL $C31A ;GOSUB SUB31A
1411 583 RETS ;<-----<<
1412 584 SUB5B4 MOV %0B,B
1414 586 LDA @6254(B)
1417 589 CMPA @6247(B)
1420 58C JNZ/JNE 02
1422 58E DJNZ B,F6
1424 590 RETS ;<-----<<
1425 591 SUB591 MOV XAB,A
1427 593 STA @627A
1430 596 MOV X0B,P19
1433 599 CLR R1A
1435 59B MOV %0B,B
1437 59D CALL @F990 ;GOSUB SUB3990
1440 5A0 POP R40
1442 5A2 POP R3F
1444 5A4 CLR A
1445 5A5 STA @625F
1448 5A8 MOVD %1A$E,R42 ;STRANGE LOCATION TO LOAD !!!!!!!!
1452 5AC CALL @C4C3 ;GOSUB SUB4C3
1455 5AF TRAP-9
1456 5B0 CMP %7F,R2C
1459 5B3 JZ/JEQ 0E
1461 5B5 MOV R1D,A
1463 5B7 JZ/JEQ 0A
1465 5B9 MOV R2F,A
1467 5BB CALL @D6A7 ;GOSUB SUB16A7
1470 5BE JPZ/JGE 03
1472 5C0 BR $D17A
1475 5C3 MOV R1A,A
1477 5C5 CMPA @625F ;DIRECT COMPARISON
1480 5C8 JNZ/JNE DB
1482 5CA DECD R42
1484 5CC JC/J8 DE
1486 5CE CLR R19
1488 5D0 BR $CE15 ;GOTO SUBE15

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1491 5D3 SUB5D3 TRAP-21 ; REFERENCED IN TABLES 16/17\*\*\*\*\*  
 1492 5D4 MOV %01,P21  
 1495 5D7 MOV %C2,P20  
 1498 5DA MOV %0F,A  
 1500 5DC TRAP-17  
 1501 5DD TRAP-9  
 1502 5DE CALL @C67B ;60SUB SUB67B  
 1503 5E1 MOVD %DEFB,R35  
 CLR B  
 1510 5E6 MOV %14,P10  
 1513 5E9 CALL @C51D ;60SUB SUB31D  
 1516 5EC MOV R24,B  
 1518 5EE LDA @C667(B) ;LOOKUP TABLE7  
 1521 5F1 PUSH A  
 1522 5F2 LDA @C663(B) ;LOOKUP TABLE6  
 1525 5F5 PUSH A  
 1526 5F8 RETB ;<-----<<  
 1527 5F7 CALL @C31B ;60SUB SUB31B  
 1530 5FA TRAP-9  
 1531 5FB MOV %01,A  
 1533 5FD TRAP-20  
 1534 5FE LDA @6255  
 1537 601 MOV R24,B  
 1539 603 CMPA @C41D(B) ;LOOKUP TABLE3  
 1542 606 JCJS CB  
 1544 608 CMP %01,B  
 1546 60A JNZ/JNE 07  
 1548 60C CMP %05,A  
 1550 60E JNZ/JNE 03  
 1552 610 BR @D917  
 1553 613 MOV A,B  
 1556 614 LDA @C621(B) ;LOOKUP TABLE4  
 1559 617 PUSH A  
 1560 61B LDA @C62A(B) ;LOOKUP TABLE5  
 1563 61E PUSH A  
 1564 620 RETB ;<-----<<  
 1565 61D TABLE3 05,06,08,09 ;AFFECTS SETUP MENU ITEMS(NUMBER OF MENU ITEMS)  
 1569 621 TABLE4 C6,C9,C7,C7,C7,C8,DB,D9;ADDRESSES OF SETUP 0-8(MBB)  
 1570 62A TABLE5 89,0F,62,DE,08,E9,B4,01,17;GOES WITH TABLE 4 (LBB)  
 1587 633 633 MOVD %DF7F,R35;REFERENCED IN TABLES 7/6  
 1591 637 JMP BE ;  
 1593 639 639 MOVD %DF70,R35;REFERENCED IN TABLES 7/6  
 1597 63D MOV %50,B  
 1599 63F CALL @C51A ;60SUB SUB31A  
 1602 642 MOVD %DF5E,R35  
 1606 646 JMP AF  
 1608 648 648 CALL @C668 ;60SUB SUB66B REFERENCED IN TABLES 7/6  
 1611 64B MOVD %DF7D,R35  
 1615 64F JMP A6  
 1617 651 651 CALL @C66B ;60SUB SUB66B REFERENCED IN TABLES 7/6  
 1620 654 MOVD %DF51,R35  
 1624 658 MOV %4C,B  
 1626 65A CALL @C51A ;60SUB SUB31A  
 1629 65D MOVD %DFAC,R35  
 1633 661 JMP 94  
 1635 663 TABLE6 33,39,48,51;(LBB) MORE SETUP ADDRESSES  
 1639 667 C6,C6,C6,C6;(MBB)  
 1643 66B SUB66B MOVD %DF34,R35  
 1647 66F MOV %50,B  
 1649 671 MOV %0F,P10  
 1652 674 CALL @C31D ;60SUB SUB31D  
 1655 677 RETB ;<-----<<  
 1656 678 SUB67B LDA @6223  
 1659 67B CLR R24  
 1661 67D BTJZ XR20,A,03 ;TO 683  
 1664 680 MOV %02,P24  
 1667 683 BTJZ XR0B,A,02 ;TO 688 (RETB)  
 1670 686 INC R24  
 1672 688 RETB ;<-----<<  
 1673 689 689 TRAP-21 ;REFERENCED IN TABLES 4/5  
 1674 68A MOV %0B,P21  
 1677 68D MOV %0F,A  
 1679 68F TRAP-17  
 1680 690 690 TRAP-9  
 1681 691 MOV %14,B  
 1683 693 MOVD %DE08,R35  
 1687 697 CALL @C51A ;60SUB SUB31A  
 1689 69A MOV %2E,A  
 1692 69C MOV %50,B  
 1694 69E MOV %63,P3B  
 1697 6A1 CALL @C396 ;60SUB SUB396  
 1700 6A4 MOVD %0697,R42;ODD VALUE TO LOAD REGISTER WITH!!!!!!  
 1704 6AB TRAP-19  
 1705 6A9 SUB6A9 TRAP-9  
 1706 6AA MOV %01,P10  
 1709 6AD MOVD %F000,R35  
 1713 6B1 MOV %3D,B  
 1715 6B3 CALL @C31D ;60SUB SUB31D  
 1718 6B6 MOVD %61F9,R35  
 1722 6B8 MOV %06,P10  
 1725 6BD MOV %65,B  
 1727 6BF CALL @CABC ;60SUB SUBABC  
 1730 6C2 LDA @67E6  
 1733 6C5 MOV %76,B  
 1735 6C7 TRAP-16  
 1736 6C8 TRAP-9  
 1737 6C9 MOVD %621A,R35  
 1741 6CD MOV %0B,P10  
 1744 6D0 MOV %79,B  
 1746 6D2 CALL @CABC ;60SUB SUBABC  
 1749 6D5 TRAP-9  
 1750 6D6 MOV R15,A  
 1752 6D8 MOV %80,B  
 1754 6DA TRAP-16  
 1755 6DB LDA @6233  
 1758 6DE TRAP-15  
 1759 6DF LDA @6226  
 1762 6E2 MOV %92,B  
 1764 6E4 TRAP-16  
 1765 6E5 LDA @6246  
 1766 6E6 MOV %97,B  
 1770 6EA TRAP-16  
 1771 6ED LDA @6247  
 1774 6EE TRAP-15  
 1775 6EF MOV R06,A  
 1777 6F1 MOV %9E,B  
 1779 6F3 TRAP-16  
 1780 6F4 TRAP-9  
 1781 6F5 MOVP P1C,A  
 1783 6F7 PUSH A  
 1784 6FB AND %01,A  
 1786 6FA MOV %A1,B  
 1788 6FC TRAP-16  
 1789 6FD POP A  
 1790 6FE RRC A  
 1791 6FF MOV %A6,B  
 1793 701 TRAP-16  
 1794 702 LDA @622E ;AUTH CODE STORED HERE\*\*\*\*\*  
 1797 705 MOV A,B ;IF 622E = 1B THEN AUTH = 'F'  
 1798 706 RL B  
 1799 707 SWAP B



1800 708 708 AND X03,B ; REFERENCED IN TABLES 4/5  
 1802 70A LDA #C759(B) ; LOOKUP TABLEB  
 1805 70D MOV XAB,B  
 1807 70F TRAP-12  
 1808 710 MOV RID,B ; RIGHT HERE IF RID = 04 THE AUTHORIZATION IS SAID TO BE 'A' (AS IN SA OR FA)  
 1810 712 AND X7F,B ; MUST BE =4 TO AND OUT TO 4 (B =4 THEN)  
 1812 714 LDA #C75D(B) ; LOOKUP TABLE9  
 1815 717 TRAP-13  
 1816 718 MOV XAE,B  
 1818 71A LDA #C232  
 1821 71D TRAP-16  
 1822 71E LDA #C231  
 1825 721 TRAP-15  
 1826 722 LDA #C230  
 1829 725 TRAP-15  
 1830 726 DEC# R42  
 1832 728 JNC/JL 2C ; TO 756  
 1834 72A MOV R19,A  
 1836 72C JZ/JEQ 03 ; TO 731  
 1838 72E BR #C6A9 ; GOTO SUB6A7  
 1841 731 MOV RIA,A  
 1843 733 JZ/JEQ 09 ; TO 73E  
 1845 735 BR #C6A4 ; GOTO SUB6A4  
 1848 738 MOVD #F138,R35 ; ADDRESS OF TRAP 14/2 LOADED!!!!!!  
 1852 73C BR #R35  
 1854 73E MOVD #621F,R35 ; GOTO TRAP 14/2  
 1858 742 MOV X06,B  
 1860 744 CLR A  
 1861 745 STA #R35 ; R34 AND R35 = 0  
 1863 747 DEC# R35  
 1865 749 DJNZ B,FA ; TO 745 (LOOP)  
 1867 74B MOV %FF,A  
 1869 74D STA #C220  
 1872 750 STA #C221  
 1875 753 BR #C690 ; GOTO 690 (LOOP)  
 1878 756 BR #C615 ; GOTO SUBE15  
 TABLE8 759 13,17,05,01 ; LEVEL OF AUTHORIZATION (IN SETUP-O) (SUBFB)  
 TABLE9 75D 0C,04,01,0B,00 ; (MEBLA)  
 1890 762 TRAP-21 ; REFERENCED IN TABLES 4/5  
 1891 763 MOV 70B,P21  
 1894 766 MOVD XE390,R46  
 1898 76A TRAP-18  
 1899 76B TRAP-9  
 1900 76C MOVD XDFEB,R35  
 1904 770 MOVD XDF7,R46  
 1908 774 LDA #6278  
 1911 777 BTJZ XRO1,A,08  
 1914 77A MOVD XDFD9,R35  
 1918 77E MOVD XE006,R46  
 1922 782 MOV X14,B  
 1924 784 CALL #C31A ; GOSUB SUB31A  
 1927 787 MOVD R46,R35  
 1930 78A MOV X3C,B  
 1932 78C CALL #C31A ; GOSUB SUB31A  
 1935 78F LDA #6278  
 1938 792 BTJZ XRO2,A,0A  
 1941 795 MOVD XE042,R35  
 1945 799 MOVD XE051,R46  
 1949 79D JMP 08  
 1951 79F MOVD XE033,R35  
 1955 793 MOVD XE060,R46  
 1959 797 MOV X7B,B  
 1961 7A9 CALL #C31A ; GOSUB SUB31A  
 1964 7AC MOVD R46,R35  
 1967 7AF MOV XAO,B  
 1969 7B1 CALL #C31A ; GOSUB SUB31A  
 1972 7B4 MOV X01,A  
 1974 7B6 TRAP-20  
 1975 7B7 TRAP-9  
 1976 7B8 MOV RIA,A  
 1978 7B9 JNZ/JNE 03 ; TO 7BF  
 1980 7C0 BR #C5D3 ; GOTO SUB5D3  
 1983 7BF LDA #6255  
 1986 7C2 DEC A  
 1987 7C3 JZ/JEQ 0B ; TO 7D0  
 1989 7C5 DEC A  
 1990 7C6 JZ/JEQ 02 ; TO 7CA  
 1992 7C8 JMP ED ; LOOP  
 1994 7CA MOVD X0002,R01 ; A=00 B=02  
 1998 7CE JMP 04 ; TO 7D4  
 2000 7D0 MOVD X0001,R01 ; A=00 B=01  
 2004 7D4 LDA #6278  
 2007 7D7 XOR B,A  
 2008 7D8 STA #6278  
 2011 7DB BR #C76C ; GOTO SUB76C  
 2014 7DE 7DE LDA #6254 ; REFERENCED IN TABLES 4/5  
 2017 7E1 MOV A,B  
 2018 7E2 CALL #C40C ; GOSUB SUB40C  
 2021 7E5 BR #C5D3 ; GOTO SUB5D3  
 2024 7E8 SUB X05,B ; REFERENCED IN TABLES 4/5  
 2026 7EA MOV B,R27  
 2028 7EC MOV X03,P26  
 2031 7EF TRAP-21  
 2032 7F0 MOV X04,P21  
 2035 7F3 MOVD XE3A2,R46  
 2034 7F7 MOVD X6260,R35  
 2043 7FB MOV R27,A  
 2045 7FD JZ/JEQ 08  
 2047 7FF MOVD XE3C6,R46  
 2051 803 MOVD X6268,R35  
 2055 807 LDA #R35  
 2057 809 JNZ/JLT 2C  
 2059 80B TRAP-18  
 2060 80C TRAP-9  
 2061 80D MOV X08,A  
 2063 80F MOV XAB,B  
 2065 811 TRAP-20  
 2066 812 MOV R27,A  
 2068 814 JNZ/JNE 05  
 2070 816 CALL #D69A ; GOSUB SUB169A  
 2073 819 JMP 03  
 2075 81B CALL #C5B4 ; GOSUB SUB5B4  
 2078 81E JZ/JEQ 17  
 2080 820 MOV X21,P42  
 2083 823 MOVD XE1B9,R35  
 2087 827 CALL #C31B ; GOSUB SUB31B  
 2090 82A TRAP-9  
 2091 82B DJNZ R42,FC  
 2094 82E DJNZ R26,BE  
 2097 831 MOV X03,P26  
 2100 834 BR #D138  
 2103 837 TRAP-21  
 2104 838 MOV X0E,P21  
 2107 83B MOV R27,A  
 2109 83D JZ/JEQ 08  
 2111 83F MOVD XE3D8,R46  
 2115 843 TRAP-18  
 2116 844 TRAP-9  
 2117 845 JMP 06  
 2119 847 MOVD XE3B4,R46  
 2123 84B TRAP-18











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2706 A92
2708 A94
2710 A96
2711 A97
2713 A99
2714 A9A
2716 A9C
2718 A9E
2721 A9I
2723 A9J
2725 A95
2726 A96
2728 A9B
2729 A99
2731 AAB
2733 AAD
2735 AAF
2736 ABO
2739 ABB
2741 ABB
2744 ABB
2746 ABA
2748 ABC
2751 ABF
2753 AC1
2756 AC4
2757 AC5
2759 AC7
2761 AC9
2764 ACC
2766 ACE
2768 AD0
2771 AD3
2774 AD6
2776 AD8
2777 AD9
2781 ADD
2782 ADE
2785 AE1
2788 AE4
2791 AE7
2793 AE9
2796 AEC
2799 AEF
2802 AF2
2804 AF4
2805 AF5
2806 AF6
2809 AF9
2810 AFA
2812 AFC
2816 B00
2819 B03
2822 B06
2825 B09
2827 B0D
2831 B0F
2834 B12
2836 B14
2838 B16
2841 B17
2843 B18
2846 B1E
2848 B20
2850 B22
2853 B25
2854 B26
2855 B27
2859 B2B
2863 B2F
2865 B31
2868 B34
2870 B36
2873 B39
2875 B3B
2878 B3E
2882 B42
2885 B45
2887 B47
2889 B49
2891 B4B
2894 B4E
2896 B50
2899 B53
2900 B54
2904 B58
2907 B5B
2908 B5C
2911 B5F
2914 B62
2917 B65
2920 B68
2922 B6A
2924 B6C
2927 B6F
2931 B73
2935 B77
2938 B7A
2939 B7B
2941 B7D
2942 B7E
2945 B81
2947 B83
2949 B85
2953 B87
2957 B8D
2960 B90
2962 B92
2965 B95
2967 B97
2969 B99
2970 B9A
2971 B9B
2975 B9F
2979 BAA
2981 BAA
2983 BAA
2985 BAA
2988 BAC
2991 BAF
2993 BBI
2995 BBS
2997 BBD
2999 BB7
3001 BBB
3003 BBB
3005 BBB
3009 BC1
3011 BC3
3013 BC5

MOV R10,A
JNZ/JNE 01
RET8 ;<-----<<<
LDA #R35
TRAP-16
DEC R3B
INC R35
ADC X00,R34
DEC R10
JNZ/JNE 01
RET8 ;<-----<<<
LDA #R35
TRAP-15
DEC R3B
INC R35
JNZ/JNE EF
MOV Z2E,A
TRAP-13
MOV RSA,R3B
JMP E7
MOV ZFF,P3B
LDA #R35
MOV X0B,B
XOR R00,R3B
AND Z7F,A
XOR R00,R3B
RL A
RL R3B
JNC/JL 03
XOR Z9A,R3B
DJNZ B,EE
INC R35
ADC X00,R34
DJNZ R10,E2
MOV R3B,A
RET8 ;<-----<<<
TRAP-21
MOV X05,P21
; REFERENCED IN TABLES 16/17!!!!!!!
CLR A
STA #627F
STA #6280
STA #6281
MOV ZFF,A
STA #6310
STA #630F
MOV Z47,P20
MOV Z0F,A
TRAP-17
TRAP-9
MOV ZFF,P28
CLR A
MOV A,R25
MOVD XC83B,R4C
MOV X05,P21
CALL @CCAB ;GOSUB SUBCAB
CALL @CC13 ;GOSUB SUBC13
MOVD X1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!!
MOV ZAC,B
CALL @CC8D ;GOSUB SUBC8D
DEC D42
JNC/JL 0C
LDA #6310
JNZ/JNE 0A
LDA #6311
JZ/JEQ 27
JMP 03
BR SCE15 ;GOTO SUBE15
TRAP-19
TRAP-9
BTJD X01,R19,E2
BTJZ X01,R1A,DE
MOV ZOC,A
CMPA #6255 ;DIRECT COMPARISON
JNZ/JNE D7
LDA #6281
JMP 2D
MOV X05,P21
BTJD X80,R28,BA
LDA #6280
JMP B3
CLR R2B
MOV R25,A
STA #6280
MOV Z2E,A
CALL @C38D ;GOSUB SUB38D
TRAP-9
MOVD X630F,R46 ;GOSUB SUB3A7
TRAP-9
LDA #6313
STA #627F
LDA #6312
STA #6281
MOV A,R25
CLR R27
CALL @CC13 ;GOSUB SUBC13
MOVD XC83B,R4C
MOVD XE17D,R35
CALL @C31B ;GOSUB SUB31B
TRAP-9
MOV X03,B
CLR A
STA #627A(B)
DJNZ B,FB
CLR R26
MOVD X1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!!
BTJD ZFF,R27,OC
LDA #6310
JNZ/JNE 07
JNZ/JNE 06
LDA #6311
JZ/JEQ 06
JMP E0
DEC D42
JC/JB E0
BR SCE15 ;GOTO SUBE15
LDA #6255
CMP ZOC,A
JNZ/JNE 06
MOV R26,B
JZ/JEQ CE
JMP 24
CMP Z0A,A
JNC/JL 14
BTJD ZFF,R26,C4
CMP Z0B,A
JZ/JEQ 06
LDA #6281

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3016 BCB BR @CAFA ;GOTO SUBAFA  
 3017 BCB LDA #627F  
 3022 BCE BR @CAFA ;GOTO SUBAFA  
 3025 BD1 MOV R26,A  
 3027 BD3 JNZ/JNE 0B  
 3029 BD5 MOVD XE123,R35  
 3033 BD9 CALL @C318 ;GOSUB SUB318  
 3036 BDC TRAP-9  
 3037 BDD CALL @CC26 ;GOSUB SUBC26  
 3040 BE0 MOV R23,B  
 3042 BE2 JNZ/JNE 0B  
 3044 BE4 MOV R26,B  
 3046 BE6 JZ/JEQ 15  
 3048 BE8 CMP %03,B  
 3050 BEA JZ/JEQ 17  
 3052 BEC BR @CB85 ;GOTO SUBB85  
 3053 BEF MOV %21,P42  
 3058 BF2 MOVD XE132,R35  
 3062 BF6 CALL @C318 ;GOSUB SUB318  
 3065 BF9 TRAP-9  
 3066 BFA DJNZ R42,FC  
 3069 BFD LDA @6281  
 3072 C00 BR @CB68 ;GOTO SUBB68  
 3073 C03 CLR R26  
 3074 C07 MOV R24,A  
 3079 C07 BTJZ XE50,R28,05  
 3083 C08 CMPA @6280 ;DIRECT COMPARISON  
 3086 COE JZ/JEQ ED  
 3088 C10 BR @CAFA ;GOTO SUBAFA  
 3091 C13 LDA @630F  
 3094 C16 CMP R00,R25  
 3097 C19 JZ/JEQ 0A  
 3099 C1B MOV R25,A  
 3101 C1D STA @630F  
 3104 C20 MOV %FF,A  
 3106 C22 STA @6310  
 3109 C25 RETS ;<-----<<  
 3110 C26 SUBC13 MOV %0C,A  
 3112 C28 CMPA @6255 ;DIRECT COMPARISON  
 3113 C2B JNZ/JNE 0D  
 3117 C2D MOV R26,A  
 3119 C2F JZ/JEQ 27  
 3121 C31 DEC R26  
 3123 C33 MOV %2E,A  
 3125 C35 MOV R26,B  
 3127 C37 JNZ/JNE 17  
 3129 C39 RETS ;<-----<<  
 3130 C3A MOV %FF,P23  
 3133 C3D CALL @CC59 ;GOSUB SUBC59  
 3136 C40 MOV R23,B  
 3138 C42 JNZ/JNE 14  
 3140 C44 MOV R26,B  
 3142 C46 LDA @6235  
 3145 C49 STA @627B(B)  
 3148 C4C ADD %20,A  
 3150 C4E INC R26  
 3152 C50 ADD %A9,B  
 3154 C52 TRAP-12  
 3155 C53 CLR R23  
 3157 C55 CALL @CC59 ;GOSUB SUBC59  
 3160 C58 RETS ;<-----<<  
 3161 C59 SUBC59 MOV R26,B  
 3163 C5B BTJZ XFF,R23,0A  
 3167 C5F CLR R23  
 3169 C61 LDA @6235  
 3172 C64 MOV A,R24  
 3174 C66 TBTB  
 3175 C67 JMP 06  
 3177 C69 LDA @627A(B)  
 3180 C6C MOV A,R24  
 3182 C6E DEC B  
 3183 C6F JZ/JEQ 1B  
 3185 C71 PUSH B  
 3186 C72 LDA @627A(B)  
 3189 C75 MPY %0A,A  
 3191 C77 ADD R01,R24  
 3194 C7A ADC R00,R23  
 3197 C7D POP B  
 3198 C7E DEC B  
 3199 C7F JZ/JEQ 0B  
 3201 C81 LDA @627A(B)  
 3204 C84 MPY %64,A  
 3206 C86 ADD R01,R24  
 3209 C89 ADC R00,R23  
 3212 CBC RETS ;<-----<<  
 3213 C8D LDA @6230  
 3216 C90 CMP R00,R2B  
 3219 C93 JZ/JEQ 12  
 3221 C95 MOV A,R2B  
 3223 C97 ADD R2A,B  
 3225 C99 MOV %2E,A  
 3227 C9B TRAP-12  
 3228 C9C INC R2A  
 3230 C9E CMP %05,R2A  
 3233 CA1 JC/JB 05  
 3235 CA3 INC B  
 3236 CA4 MOV X2D,A  
 3238 CA6 TRAP-12  
 3239 CA7 RETS ;<-----<<  
 3240 CA8 CLR R2A  
 3242 CA9 RETS ;<-----<<  
 3243 CAB SUBCAB MOVD XE123,R35  
 3247 CAF CALL @C318 ;GOSUB SUB318  
 3250 CB2 MOV %A9,B  
 3252 CB4 CALL @CCB8 ;GOSUB SUBC88  
 3255 CB7 RETS ;<-----<<  
 3256 CBB SUBC88 MOV R25,R23  
 3259 CBB MOV %1F,A  
 3261 CBD INC A  
 3262 CBE SUB %64,R23  
 3265 CC1 JC/JB FA  
 3267 CC3 TRAP-12  
 3268 CC4 ADD %64,R23  
 3271 CC7 MOV %1F,A  
 3273 CC9 INC A  
 3274 CCA SUB %0A,R23  
 3277 CCD JC/JB FA  
 3279 CCF TRAP-13  
 3280 CDO ADD X2A,R23  
 3283 CD3 MOV R23,A  
 3285 CD5 TRAP-13  
 3286 DD6 RETS ;<-----<<  
 3287 DD7 SUBCD7 TRAP-21 ;REFERENCED IN TABLES 16/17\*\*\*\*\*  
 3288 DD8 MOV Z08,P21  
 3291 CDB TRAP-9  
 3292 CDC CALL @D0F9 ;GOSUB SUB10F9  
 3295 DDF JN/JLT 07  
 3297 CE1 CALL @D0D8 ;GOSUB SUB10D8  
 3300 CE4 AND X7F,A  
 3302 CE6 STA #446  
 3304 CEB AND %60,R20



3307 CEB CLR R1F  
 3309 CED SUBCED TRAP-21  
 3310 CEE MOV X08,P21  
 3313 CR1 TRAP-9  
 3314 CR2 CALL @CEFB ;GOSUB SUBEFB  
 3317 CR5 TRAP-9  
 3318 CR6 LDA #6278  
 3321 CR9 BTJ0 X02,A,18  
 3324 CFC CALL @CECB ;GOSUB SUBECB  
 3327 CRF JN/JLT 05  
 3329 D01 CALL @CEB6 ;GOSUB SUBE86  
 3332 D04 JMP EF  
 3334 D06 CALL @DOF4 ;GOSUB SUB10F4  
 3337 D09 JN/JLT 09  
 3339 D0B LDA #R45  
 3341 D0D OR X80,A  
 3343 D0F STA #R45  
 3345 D11 CALL @CE53 ;GOSUB SUBE53  
 3348 D14 TRAP-9  
 3349 D15 BTJZ X20,R1F,03  
 3353 D19 BR @CD4F ;GOTO SUBD4F  
 3356 DIC MOV R15,A  
 3358 DIE AND X60,A  
 3360 D20 CMPA @C279 DIRECT COMPARISON  
 3363 D23 JZ/JEQ 06  
 3365 D25 STA #6279  
 3368 D28 AND XFB,R1F  
 3371 D2B BTJ0 X80,R1D,0E; IS THE AUTHORIZATION GARBAGE????????????????????? TO D3D  
 3373 D2F BTJZ XFF,R1E,1C  
 3379 D33 BTJ0 X07,R1D,02;IS IT 'M','E' OR 'B'????????????????????? TO D4F  
 3383 D37 JMP 16 ;JUMP TO D4F  
 3385 D39 BTJ0 X04,R1F,12  
 3387 D3D MOV R10,B  
 3391 D3F AND X07,B  
 3393 D41 CMP X04,B  
 3395 D43 JNZ/JNE 04 ;TO D49  
 3397 D45 BTJ0 X01,R1F,06;TO D4F  
 3401 D49 OR X05,R1F  
 3404 DAC BR @D19A ;GOTO SUB119A  
 3407 D4F SUBD4F CALL X01,R1D ;IS IT AN 'E'  
 3410 D52 JZ/JEQ 47 ;TO D9B  
 3412 D54 LDA #628D  
 3415 D57 JNZ/JNE 4B ;TO DA4  
 3417 D59 LDA #628E  
 3420 D5C JZ/JEQ 3D ;TO D9B  
 3422 D5E LDA #61E7  
 3425 D61 JZ/JEQ 38 ;TO D9B  
 3427 D63 CMPA @C233 ;DIRECT COMPARISON  
 3430 D66 JNZ/JNE 33 ;TO D9B  
 3432 D68 LDA #628B  
 3435 D6B BTJ0 X80,A,2D ;TO D9B  
 3438 D6E LDA #6230  
 3441 D71 MOV A,R23  
 3443 D73 LDA #6231  
 3446 D76 MOV A,R24  
 3448 D78 LDA #6232  
 3451 D7B MOV A,R25  
 3453 D7D LDA #61F5  
 3456 D80 MOV A,R26  
 3458 D82 LDA #61F6  
 3461 D85 MOV A,R27  
 3463 D87 LDA #61F7  
 3466 D8A MOV A,R28  
 3468 D8C CALL @CE2D ;GOSUB SUBE2D  
 3471 D8F JPZ/JGE 1C ;TO DAD  
 3473 D91 CALL @CE37 ;GOSUB SUBE37  
 3476 D94 JZ/JEQ 17 ;TO DAD  
 3478 D96 MOV X80,A  
 3480 D98 STA #628B  
 3483 D9B BTJZ X40,R1F,05;TO DA4  
 3487 D9F CLR R20  
 3489 DA1 BR @CCED ;GOTO SUBCED  
 3492 DA4 BTJ0 X40,R1F,02;TO DAA  
 3496 DAB CLR R20  
 3498 DAA BR @CCF5 ;GOTO SUBCF5  
 3501 DAD DAD LDA #628F  
 3504 DB0 JNZ/JNE F2 ;TO DA4 (LOOP)  
 3506 DB2 LDA #6290  
 3509 DB5 JNZ/JNE ED ;TO DA4 (LOOP)  
 3511 DB7 CALL @CE1D ;GOSUB SUBE1D  
 3514 DBA CALL @CE2D ;GOSUB SUBE2D  
 3517 DBD JPZ/JGE DC ;TO D9B (LOOP)  
 3519 DBF CLR R20  
 3521 DC1 LDA #61F1  
 3524 DC4 BTJZ X80,A,03 ;TO DCA  
 3527 DC7 DR X20,R20  
 3530 DCA BTJ0 X02,A,03 ;TO DDO  
 3533 DCD DR X40,R20  
 3536 DDO LDA #628E  
 3539 DD3 CMPA @628C ;DIRECT COMPARISON  
 3542 DDE JNZ/JNE 08 ;TO DEO  
 3544 DB8 BTJ0 X40,R1F,BF  
 3548 DDC BTJ0 X40,R1F,30  
 3552 DEO AND XDF,R1F  
 3555 DE3 STA #628C  
 3558 DE6 TRAP-9  
 3559 DE7 CALL @CEFB ;GOSUB SUBEFB  
 3562 DEA TRAP-9  
 3563 DEB MOVD #628E,R46  
 3567 DEF CALL @C3A7 ;GOSUB SUB3A7  
 3570 DF2 LDA #61F1  
 3573 DF5 BTJZ X80,A,0C ;TO E04  
 3576 DF8 MOV XA6,B  
 3578 DFA MOVD #6235,R35  
 3582 DFE MOV X04,P10  
 3585 E01 CALL @CACB ;GOSUB SUBABC  
 3588 E04 DR X40,R1F  
 3591 E07 CALL @CE37 ;GOSUB SUBE37  
 3594 E0A JZ/JEQ 8A ;TO D96 (LOOP)  
 3596 E0C MOVD X0B8A,R42 ;ODD VALUE TO LOAD !!!!!!!  
 3600 E10 TRAP-9  
 3601 E11 DECD R42  
 3603 E13 JC/JB BF ;TO DA4 (LOOP)  
 3605 E15 DR X20,R1F  
 3608 E18 CLR R20  
 3610 E1A BR @CCED ;GOTO SUBCED  
 3613 E1D SUBE15 LDA #61F2  
 3616 E20 MOV A,R26  
 3618 E22 LDA #61F3  
 3621 E25 MOV A,R27  
 3623 E27 LDA #61F4  
 3626 E2A MOV A,R28  
 3628 E2C RETS ;<-----<<  
 3629 E2D SUBE2D SUB R23,R26  
 3632 E30 BBB R24,R27  
 3635 E33 BBB R25,R28  
 3638 E36 RETS ;<-----<<  
 3639 E37 MOV XFF,B  
 3641 E39 LDA #61F2  
 3644 E3C CMPA @61F5 ;DIRECT COMPARISON  
 3647 E3F JNZ/JNE 11



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3649 E41      LDA #61F3
3652 E44      CMPA #61F6 ;DIRECT COMPARISON
3655 E47      JNZ/JNE 09
3657 E49      LDA #61F4
3660 E4C      CMPA #61F7 ;DIRECT COMPARISON
3663 E4F      JNZ/JNE 01
3665 E51      CLR B
3666 E52      RETS   ;<-----<<
3667 E53      SUBE53
3668 E54      POP A
3671 E57      STA #6215
3672 E58      POP A
3673 E5B      STA #6216
3675 E5B      CLR R20
3677 E5D      BTJZ %40,R1F,04
3681 E61      CALL SCEFB ;GOSUB SUBEFB
3684 E64      TRAP-9
3685 E65      MOV X04,P24
3688 E68      MOV X30,A
3690 E6A      BTJZ %31,R24,02
3694 E6E      MOV X07,A
3696 E70      MOV X13,B
3698 E72      TRAP-12
3699 E73      MOV X07,P42
3702 E76      TRAP-9
3703 E77      DJNZ R42,FC
3706 E7A      DJNZ R24,E8
3709 E7D      LDA #6216
3712 E80      PUSH A
3713 E81      LDA #6215
3716 E84      PUSH A
3717 E85      RETS   ;<-----<<
3718 E86      SUBE86
3719 E87      POP A
3722 E8A      STA #6215
3723 E8B      POP A
3726 E8E      STA #6216
3728 E90      CLR R20
3732 E94      BTJZ %40,R1F,04
3733 E97      CALL SCEFB ;GOSUB SUBEFB
3735 E98      TRAP-9
3736 E98      LDA #R46
3738 E9A      MOV A,B
3739 E9B      CLR A
3740 E9C      STA #R46
3742 E9E      DECD R46
3744 EA0      LDA #R46
3746 EA2      OR X80,A
3748 EA4      STA #R46
3750 EA6      SUB X02,R46
3753 EA9      SBB X00,R45
3756 EAC      MPY X18,B
3758 EAE      MOVD R01,R42
3761 EB1      INC R42
3763 EB3      ADC X00,R41
3766 EB6      CALL SC3A7 ;GOSUB SUB3A7
3769 EB9      TRAP-9
3770 EBA      DECD R42
3772 EBC      JC/JB FB
3774 EBE      CALL SCEFB ;GOSUB SUBEFB
3777 EC1      TRAP-9
3778 EC2      LDA #6216
3781 EC5      PUSH A
3782 EC6      LDA #6215
3785 EC9      PUSH A
3786 ECA      RETS   ;<-----<<
3787 ECB      MOV X05,P25
3790 ECE      LDA #6559
3793 ED1      DJNZ R25,02
3796 ED4      JMP 19
3798 ED6      MOV A,R24
3800 ED8      CALL #6008 ;GOSUB SUB10DB
3803 EDB      AND X0F,A
3805 EDD      JNZ/JNE 09
3807 EDF      INC R46
3809 EE1      ADC X00,R45
3812 EE4      LDA #R46
3814 EE5      JNZ/JNE 10
3816 EEB      MOV R24,A
3818 EEA      CMPA #659C ;DIRECT COMPARISON
3821 EED      JNZ/JNE 03
3823 EEF      MOV %FF,A
3825 EF1      RETS   ;<-----<<
3826 EF2      MOV A,B
3827 EF3      LDA #6594(B)
3830 EF6      JMP D9
3832 EF8      MOV R24,A
3834 EFA      RETS   ;<-----<<
3835 EFB      MOV X0F,A
3837 EFD      TRAP-17
3838 EFE      AND %BF,R1F
3841 F01      RETS   ;<-----<<
3842 F02      MOV R0B,B
3844 F04      LDA #6238
3847 F07      CMPA #6002(B)
3850 FOA      JZ/JEQ 03
3852 F0C      BR #F38A
3855 F0F      LDA #6237
3858 F12      CMPA #6003(B)
3861 F15      JNZ/JNE F5
3863 F17      LDA #6236
3866 F1A      CMPA #6004(B)
3869 F1D      JNZ/JNE ED
3871 F1F      LDA #6028(B)
3874 F22      CMPA #6247 ;DIRECT COMPARISON
3877 F25      JNZ/JNE E5
3879 F27      LDA #6006(B)
3882 F2A      CMP X04,A
3884 F2C      JC/JB DE
3886 F2E      MPY X81,A
3888 F30      MOVD X6390,R48
3892 F34      ADD R01,R48
3895 F37      ADC R00,R47
3898 F3A      LDA #R48
3900 F3C      MOV R0B,B
3902 F3E      LDA #6007(B)
3905 F41      CMPA #R48
3907 F43      JZ/JEQ 74
3909 F45      STA #R48
3911 F47      BTJZ %R40,A,0B
3914 F4A      MOV %FF,A
3916 F4C      STA #6268
3919 F4F      STA #6260
3922 F52      MOV %FF,A
3924 F54      INC R48
3926 F56      ADC X00,R47
3929 F59      STA #R48
3931 F5B      DECD R48
3933 F5D      MOV R0B,B
3935 F5F      ADD X07,B
3937 F61      CALL SC079 ;GOSUB SUB079
3940 F64      LDA #6282
3943 F67      BTJO X0F,A,49

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3946 F6A  
 3948 F6C  
 3950 F6E  
 3953 F71 ;DIRECT COMPARISON  
 3956 F74  
 3958 F76 ;DIRECT COMPARISON  
 3961 F79 ;EITHER OR SITUATION  
 3963 F7B  
 3964 F7C  
 3967 F7F  
 3970 F82  
 3972 F84  
 3974 F86  
 3976 F88  
 3979 F8B  
 3980 F8C  
 3982 F8E  
 3983 F91  
 3986 F92  
 3989 F95  
 3991 F97  
 3994 F9A  
 3995 F9B  
 3997 F9D  
 4000 FA0  
 4001 FA1  
 4004 FA4  
 4006 FA6  
 4009 FA7  
 4012 FAC  
 4013 FAD  
 4016 F80  
 4019 FB3 ;GOSUB SUB106  
 4022 FB6  
 4025 FB9  
 4027 FBB  
 4030 FBE  
 4032 FCO  
 4033 FC1  
 4035 FC3  
 4038 FC6  
 4040 FC8  
 4043 FCB  
 4046 FCE  
 4047 FCF  
 4049 FD1  
 4052 FD4  
 4055 FD7 ;REFERENCED IN TABLES 16/17\*\*\*\*\*  
 4056 FDB  
 4059 FDB  
 4061 FDD  
 4062 FDE  
 4063 FDF  
 4066 FE2  
 4068 FE4  
 4071 FE7  
 4072 FE8  
 4075 FE9  
 4077 FED  
 4081 FF1 ;GOSUB SUB318  
 4084 FF4  
 4085 FF5  
 4088 FFB  
 4091 FF8  
 4092 FFC  
 4093 FFF  
 4098 1002 ;GOSUB SUB10F9  
 4101 1003  
 4103 1007  
 4106 100A  
 4108 100C  
 4110 100E  
 4113 1011  
 4115 1013  
 4117 1015  
 4121 1019  
 4124 101C  
 4126 101E  
 4129 1021  
 4131 1023 ;GOSUB SUB10DB  
 4134 1026  
 4136 1028  
 4138 102A  
 4141 102D  
 4142 102E  
 4145 1031 ;GOSUB SUB38D  
 4147 1033  
 4150 1036  
 4153 1037 ;GOSUB SUB10DB  
 4156 103C  
 4158 103E  
 4160 1040  
 4162 1042  
 4165 1045  
 4166 1046  
 4168 1048  
 4171 1048  
 4174 104E  
 4177 1051  
 4178 1052  
 4182 1056 ;GOSUB SUB318  
 4185 1059  
 4186 105A  
 4189 105D  
 4190 105E  
 4194 1062  
 4195 1063  
 4197 1065  
 4199 1067  
 4202 106A  
 4204 106C  
 4206 106E  
 4208 1070 ;DIRECT COMPARISON  
 4211 1073  
 4213 1075  
 4215 1077 ;DIRECT COMPARISON  
 4218 107A  
 4220 107C  
 4223 107F  
 4225 1081  
 4227 1083  
 4229 1085  
 4232 1088  
 4234 108A ;GOSUB SUB10DB  
 4237 108D  
 4239 108F  
 4241 1091  
 4243 1093  
 4247 1097 ;GOSUB SUB318  
 4250 109A







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4602 11FA      MOVD %E240,R35
4606 11FE      MOV %50,B
4608 1200      MOV R27,A
4610 1202      JN/JLT 02
4612 1204      MOV %78,B
4614 1206      CALL %C31A ;GOSUB SUB31A
4617 1209      MOV R24,B
4619 120B      ADD X02,B
4621 120D      TRAP-10
4622 120E      LDA #6100(B)
4625 1211      BTJZ %R01,A,0A
4628 1214      MOVD %E27C,R35
4632 1218      MOV X05,P10
4635 121B      CALL %C337 ;GOSUB SUB337
4638 121E      MOV R27,A
4640 1220      JPZ/JGE 27
4642 1222      CALL %D8F9 ;GOSUB SUB18F?
4645 1225      JMP 22
4647 1227      MOV X43,P42
4650 122A      TRAP-21
4651 122B      MOV X08,P21
4654 122E      CLR R20
4656 1230      MOV R24,B
4658 1232      TRAP-10
4659 1233      LDA #113(B)
4662 1236      BTJZ %R10,A,09
4663 1239      MOV X44,B
4667 123B      MOVD %E288,R35
4671 123F      CALL %C31A ;GOSUB SUB31A
4674 1242      MOV R24,A -
4676 1244      MOV %78,B
4678 1246      CALL %D607 ;GOSUB SUB1607
4681 1249      TRAP-9
4682 124A      CALL %D5CC ;GOSUB SUB15CC
4685 124D      MOV R24,B
4687 124F      ADD X02,B
4689 1251      TRAP-10
4690 1252      LDA #6100(B)
4693 1255      BTJZ %R01,A,0B
4696 1258      CALL %FC22 ;GOSUB SUB3C22
4699 125B      MOV X40,B
4701 125D      CALL %FCEE ;GOSUB SUB3CEE
4704 1260      DJNZ R42,E6
4707 1263      BR %CCED ;GOTO SUBCED
4710 1266      MOV X40,P20
4713 1267      MOV X2E,A
4715 126B      CALL %C38D ;GOSUB SUB38D
4718 126E      MOVD %E2F4,R35
4722 1272      CALL %C31B ;GOSUB SUB31B
4725 1275      TRAP-9
4726 1276      BTJZ %80,R26,5F
4730 127A      MOV X64,B
4732 127C      MOVD %E2B8,R35
4736 1280      CALL %C31A ;GOSUB SUB31A
4739 1283      MOVD X1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!!
4743 1287      TRAP-19
4744 1288      TRAP-9
4745 1289      MOV %3C,B
4747 128B      MOV X03,P10
4750 128E      MOVD %DE44,R35
4754 1292      CALL %C31D ;GOSUB SUB31D
4757 1295      LDA #22F
4760 1298      MOV X4B,B
4762 129A      CALL %D617 ;GOSUB SUB1617
4765 129D      LDA #22F
4768 12A0      CALL %D6A7 ;GOSUB SUB16A7
4771 12A3      JN/JLT 2E
4773 12A5      LDA #22E
4776 12A8      AND X18,A
4778 12A9      JZ/JEQ 2A ;TO 12D6
4780 12AC      DECD R42
4782 12AE      JC/JS 03 ;TO 12B3
4784 12B0      BR %CE15 ;GOTO SUBE15
4787 12B3      MOV R19,A
4789 12B5      JNZ/JNE D1
4791 12B7      MOV R1A,A
4793 12B9      JNZ/JNE CC
4795 12BB      LDA #622F
4798 12B8      CALL %D6A7 ;GOSUB SUB16A7
4801 12C1      JN/JLT 10
4803 12C3      LDA #22E
4805 12C6      AND X1B,A
4808 12C8      JZ/JEQ OC ;TO 12D6
4810 12CA      LDA #622F
4813 12CD      MOV A,B
4814 12CE      CALL %D3FD ;GOSUB SUB3FD
4817 12D1      JMP E8
4819 12D3      BR %CCED ;GOTO SUBCED
4822 12D6      BR %CCD7 ;GOTO SUBCD7
4825 12D9      MOVD X1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!!
4827 12DD      TRAP-19
4830 12DE      TRAP-9
4831 12DF      CALL %D7E1 ;GOSUB SUB17E1
4834 12E2      CALL %D5CC ;GOSUB SUB15CC
4837 12E5      TRAP-9
4838 12E6      MOV R24,B
4840 12E8      ADD X02,B
4842 12EA      TRAP-10
4843 12E9      LDA #6100(B)
4846 12EE      BTJZ %R01,A,0B
4849 12F1      CALL %FC22 ;GOSUB SUB3C22
4852 12F4      MOV %78,B
4854 12F6      CALL %FCEE ;GOSUB SUB3CEE
4857 12F9      TRAP-9
4858 12FA      DECD R42
4860 12FC      JC/JS 03
4862 12FE      BR %CE15 ;GOTO SUBE15
4865 1301      MOV R17,A
4867 1303      JNZ/JNE D9
4867 1305      MOV R20,A
4871 1307      JZ/JEQ 11
4873 1309      MOV R1A,A
4875 130B      JNZ/JNE 03
4877 130D      BR %D38B
4880 1310      MOV X0C,A
4882 1312      CMPA %255 ;DIRECT COMPARISON
4885 1315      JNZ/JNE C2
4887 1317      BR %D19A
4890 131A      MOV R1A,A
4892 131C      JNZ/JNE BB
4894 131E      MOV X01,P28
4897 1321      BTJZ %80,R26,1B
4901 1325      CALL %D5AE ;GOSUB SUB15AE
4904 1328      JC/JS 16
4906 132A      TRAP-9
4907 132B      MOV X20,P42
4910 132E      TRAP-21
4911 132F      MOV X06,P21
4914 1332      MOVD %DEBC,R35
4918 1336      CALL %C31B ;GOSUB SUB31B
4921 1339      TRAP-9

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4922 133A DJNZ R42,FC
4925 133D BR #D19A
4928 1340 MOV R26,A
4930 1342 CALL #D6A7 ;GOSUB SUB16A7
4933 1345 JN/JLT 13
4935 1347 MOV A,B
4936 1348 CALL #C402 ;GOSUB SUB402
4939 134B MOV R26,A
4941 134D CALL #D6A7 ;GOSUB SUB16A7
4944 1350 JN/JLT 03
4946 1352 BR #CC07 ;GOTO SUBCD7
4949 1355 CALL #D68A ;GOSUB SUB16BA
4952 1358 JMP E6
4954 135A BTJO X08,R26,03
4958 135E BR #CCED ;GOTO SUBCED
4961 1361 LDA #6260
4964 1364 JN/JLT 41
4966 1366 TRAP-21
4967 1367 MOV X04,P21
4970 136A MOV X2E,A
4972 136C CALL #C38D ;GOSUB SUB38D
4975 136F TRAP-9
4976 1370 MOV XBC,B
4978 1372 MOVD XE1AA,R35
4982 1376 CALL #C31A ;GOSUB SUB31A
4983 1379 MOVD XE19B,R35
4989 137D CALL #C31B ;GOSUB SUB31B
4992 1380 TRAP-9
4993 1381 CALL #D8AO ;GOSUB SUB18AO
4996 1384 CALL #D69A ;GOSUB SUB169A
4999 1387 JZ/JEQ 1E
5001 1389 MOV X21,P42
5004 138C TRAP-21
5005 138D MOV X04,P21
5008 1390 MOV XBC,B
5010 1392 MOVD XE8A5,R35
5014 1396 CALL #C31A ;GOSUB SUB31A
5017 1399 MOVD XE189,R35
5021 139D CALL #C31B ;GOSUB SUB31B
5024 13A0 TRAP-9
5025 13A1 DJNZ R42,FC
5028 13A4 BR #366
5031 13A7 TRAP-21
5032 13AB MOV X09,P21
5035 13AB MOVD XE444,R46
5039 13AF TRAP-18
5040 13B0 TRAP-9
5041 13B1 MOV R24,A
5043 13B3 MOV X00,B
5045 13B5 CALL #D609 ;GOSUB SUB1609
5048 13B8 BR #D2D9
5051 13B9 CALL #D869 ;GOSUB SUB1869
5054 13BE BR #CCED
5057 13C1 TRAP-9
      13C1 MOV XOF,A ;REFERENCED IN TABLES 16/17*****
5058 13C2 TRAP-17
5060 13C4 TRAP-9
5061 13C5 TRAP-21
5062 13C6 TRAP-9
5063 13C7 MOV X08,P21
5066 13CA MOV RID,A
5068 13CC AND Z7F,A
5070 13CE JZ/JEQ F1
5072 13D0 MOV RID,A
5074 13D2 JPZ/JGE 03 ;NO MOVE ITS VALUE TO A REGISTER
5076 13D4 BR #CCD7 ;TO BE MANIPULATED BY CC07
5079 13D7 CLR R28
5081 13D9 AND X40,R20
5084 13DC CALL #D7D0 ;GOSUB SUB17D0
5087 13DF CALL #D6BA ;GOSUB SUB16BA
5090 13E2 MOV R26,A
5092 13E4 BTJO X08,A,05
5093 13E7 CALL #D6A7 ;GOSUB SUB16A7
5098 13EA JN/JLT 06
5100 13EC MOV X03,P21
5103 13EF BR #D495
5106 13F2 MOV X44,P42
5109 13F5 TRAP-9
5110 13F6 TRAP-21
5111 13F7 MOV X08,P21
5114 13FA CLR R20
5116 13FC CLR R27
5118 13FE BTJZ X10,R26,08
5122 1402 MOVD XEDECB,R35
5125 1406 MOV X64,B
5128 1408 CALL #C30D ;GOSUB SUB30D
5131 140B JMP 22
5133 140D BTJZ X20,R26,08
5137 1411 MOVD XDE17,R35
5141 1415 MOV X78,B
5143 1417 JMP 13
5145 1419 CALL #D6B1 ;GOSUB SUB16B1
5148 141C BTJZ X40,R26,2D
5152 1420 MOVD XE240,R35
5156 1424 MOV X50,B
5158 1426 MOV R27,A
5160 1428 JN/JLT 02
5162 142A MOV X78,B
5164 142C CALL #C31A ;GOSUB SUB31A
5167 142F MOV R24,B
5169 1431 ADD X02,B
5171 1433 TRAP-10
5172 1434 LDA #6100(B)
5173 1437 BTJZ X01,A,0A
5178 143A MOVD XE26D,R35
5182 143E MOV X05,P10
5185 1441 CALL #C337 ;GOSUB SUB337
5189 1444 MOV R27,A
5190 1446 JPZ/JGE 1E
5192 1448 CALL #D8F9 ;GOSUB SUB18F9
5195 144B JMP 19
5197 144D MOV R24,B
5199 144F TRAP-10
5200 1450 LDA #61113(B)
5203 1453 BTJZ X010,A,09
5206 1456 MOV X64,B
5208 1458 MOVD XE2BB,R35
5212 145C CALL #C31A ;GOSUB SUB31A
5215 145F MOV X78,B
5217 1461 MOV R24,A
5219 1463 CALL #D609 ;GOSUB SUB1609
5222 1466 TRAP-9
5223 1467 CALL #D5ED ;GOSUB SUB15ED
5226 146A MOV X02,B
5228 146C LDA #622D
5231 146F RL A
5232 1470 RL A
5233 1471 RL A
5234 1472 RLC B
5235 1473 ADD X02,B
5237 1475 TRAP-10
5238 1476 LDA #6100(B)

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5241 1479
5244 147C
5247 147F
5249 1481
5252 1484
5255 1487
5258 148A
5260 148C
5263 148F
5266 1492
5269 1495
5272 1498
5274 149A
5277 149D
5281 14A1
5284 14A4
5285 14A5
5289 14A9
5290 14AA
5291 14AB
5294 14AE
5297 14B1
5298 14B2
5300 14B4
5303 14B7
5304 14B8
5305 14B9
5306 14BA
5307 14BB
5309 14BD
5310 14BE
5313 14C1
5316 14C4
5319 14C7
5321 14C9
5324 14CC
5325 14CD
5327 14CF
5329 14D1
5332 14D4
5334 14D6
5336 14DB
5338 14DA
5340 14DC
5342 14DE
5344 14E0
5347 14E3
5349 14E5
5352 14E8
5354 14EA
5357 14ED
5359 14EF
5361 14F1
5363 14F3
5365 14F5
5368 14FB
5372 14FC
5375 14FF
5377 1501
5378 1502
5381 1505
5383 1507
5386 150A
5387 150B
5390 150E
5393 1511
5396 1514
5398 1516
5399 1517
5402 151A
5403 151B
5406 151E
5410 1522
5413 1525
5414 1526
5417 1529
5420 152C
5422 152E
5425 1531
5427 1533
5428 1534
5431 1537
5433 1539
5436 153C
5438 153E
5441 1541
5444 1544
5446 1546
5450 154A
5453 154D
5456 1550
5458 1552
5459 1553
5462 1556
5464 1558
5467 155B
5471 155F
5474 1562
5475 1563
5479 1567
5481 1569
5484 156C
5488 1570
5491 1573
5492 1574
5495 1577
5498 157A
5500 157C
5503 157E
5504 1580
5507 1583
5509 1585
5513 1589
5516 158C
5520 1590
5523 1593
5524 1594
5527 1597
5530 159A
5531 159B
5534 159E
5538 15A2
5539 15A3
5540 15A4
5542 15A6
5544 15A8
5547 15AB
5550 15AE
5553 15B1
5555 15B3
5556 15B4

BTJZ %R01,A,08 ;GOSUB SUB3C22
CALL %FC22
MOV %A0,B
CALL %FCEE ;GOSUB SUB3CEE
DJNZ R42,DF
CMP %04,R1D ;IS THE AUTHORIZATION AN 'A'???
JZ/JEQ 03 ;YES JUMP OVER THE BRANCH
BR %CCD7 ;GOTO SUBCD7
OR %04,R1F
BR %CCED ;GOTO SUBCED
MOV %40,P20
MOV %2E,A
CALL %C38D ;GOSUB SUB38D
MOVD %E2F4,R35
CALL %C318 ;GOSUB SUB318
TRAP-9
MOVD %1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!!
TRAP-19
TRAP-9
CALL %D7E1 ;GOSUB SUB17E1
CALL %D5ED ;GOSUB SUB15ED
TRAP-9
MOV %02,B
LDA %622D
RL A
RL A
RL A
RLC B
ADD %02,B
TRAP-10
LDA %6100(B)
BTJZ %R01,A,0B
CALL %FC22 ;GOSUB SUB3C22
MOV %7B,B
CALL %FCEE ;GOSUB SUB3CEE
TRAP-9
DEC D R42
JC/JB 03
BR %CE15 ;GOTO SUBE15
MOV R19,A
JNZ/JNE D2
MOV R28,A
JZ/JEQ 15
MOV R1A,A
JNZ/JNE 08
CALL %D869 ;GOSUB SUB1869
CLR R26
BR %D3C1
MOV %0C,A
CMP A %6255 ;DIRECT COMPARISON
JNZ/JNE B6
JMP F4
MOV R1A,A
JNZ/JNE B0
MOV %01,P28
BTJZ %0B,R26,30 ;GOSUB SUB1631 (GET SERIAL NUMBER DATA)
CALL %D631
MOV R24,B
TRAP-10
LDA %6111(B)
MOV A,R3D
LDA %6112(B)
SETC
DSB R3D,R35
SSB R00,R3A
SSB %00,R3E
JZ/JB 16
TRAP-9
MOV %2D,P42
TRAP-21
MOV %03,P21
MOVD %DEBC,R35
CALL %C318 ;GOSUB SUB318
TRAP-9
DJNZ R42,FC
BR %D4B7
MOV R26,A
CALL %D6A7 ;GOSUB SUB16A7
JN/JLT 13
MOV A,B
CALL %C407 ;GOSUB SUB407
MOV R26,A
CALL %D6A7 ;GOSUB SUB16A7
JN/JLT 03
BR %CCD7 ;GOTO SUBCD7
CALL %D6BA ;GOSUB SUB16BA
JMP E6
BTJD %0B,R26,03
BR %D3C1
LDA %6260
JN/JLT 48
TRAP-21
MOV %04,P21
MOV %2E,A
CALL %C38D ;GOSUB SUB38D
MOVD %E2F4,R35
CALL %C318 ;GOSUB SUB318
TRAP-9
MOV %E1AA,R35
MOV %BC,B
CALL %C31A ;GOSUB SUB31A
MOVD %E19B,R35
CALL %C318 ;GOSUB SUB318
TRAP-9
CALL %D89B ;GOSUB SUB189B
CALL %D69A ;GOSUB SUB169A
JZ/JEQ 1E
MOV %21,P42
TRAP-21
MOV %04,P21
MOV %BC,B
MOVD %EB45,R35
CALL %C31A ;GOSUB SUB31A
MOVD %E1B9,R35
CALL %C318 ;GOSUB SUB318
TRAP-9
DJNZ R42,FC
BR %D5B2
TRAP-21
MOV %09,P21
MOVD %E444,R46
TRAP-18
TRAP-9
MOV R24,A
MOV %00,B
CALL %D609 ;GOSUB SUB1609
BR %D4A5
CALL %D631 ;GOSUB SUB1631 (GET SERIAL NUMBER DATA)
MOV R24,B
TRAP-10
LDA %6111(B)

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5832 16CB          RL A
5833 16C9          RLC R24
5835 16CB          LDA #622E
5838 16CE          AND X18,A
5840 16D0          JZ/JEQ OC
5842 16D2          MOV X80,P26
5845 16D5          LDA #622F
5848 16D8          AND X07,A
5850 16DA          OR R00,R26
5853 16DD          RETS
5854 16DE          ;<-----<<<
5856 16E0          MOV R23,B
5857 16E1          TRAP-10
5860 16E4          LDA #6112(B)
5862 16E6          MOV A,R3B
5863 16E9          LDA #6113(B)
5867 16EB          MOV A,R3A
5869 16ED          MOV R23,B
5871 16EF          SUB X02,B
5872 16F0          TRAP-10
5874 16F2          MOV R3B,A
5877 16F5          CMPA #6100(B)
5879 16F7          JNZ/JNE 25
5881 16F9          MOV R3A,A
5884 16FC          CMPA #6101(B)
5886 16FE          JNZ/JNE 1E
5888 1700          MOV R24,B
5890 1702          ADD X02,B
5891 1703          TRAP-10
5894 1706          LDA #6100(B)
5896 1708          XOR R25,A
5899 170B          BTJO %60,A,11
5901 170D          MOV R24,B
5902 170E          TRAP-10
5904 1710          MOV R3B,A
5907 1713          CMPA #6100(B)
5909 1715          JNZ/JNE 07
5911 1717          MOV R3A,A
5914 171A          CMPA #6101(B)
5916 171C          JZ/JEQ 04
5919 171F          MOV X10,P26
5920 1720          RETS
5923 1723          ;<-----<<<
5925 1725          LDA #6114(B)
5928 1728          XOR R25,A
5931 172B          BTJO %60,A,F4
5934 172E          LDA #624B
5936 1730          CMP R00,R16
5939 1733          JNZ/JNE 20
5942 1736          LDA #6109(B)
5944 1738          CMPA #624C
5947 173B          JNZ/JNE 1B
5950 173E          LDA #610A(B)
5952 1740          CMPA #624D
5955 1743          JNZ/JNE 10
5958 1746          LDA #610B(B)
5960 1748          CMPA #624E
5963 174B          JNZ/JNE 08
5966 174E          ;DIRECT COMPARISON
5968 1750          LDA #610C(B)
5971 1753          CMPA #624F
5973 1755          JNZ/JNE 74
5976 1758          LDA #6251
5979 175B          XOR R25,A
5981 175D          BTJO %60,A,05
5984 1760          LDA #6252
5987 1763          JNZ/JNE 67
5990 1766          LDA #6113(B)
5993 1769          XOR R10,A
5995 176B          BTJO %60,A,04
5998 176E          LDA #6114(B)
6000 1770          MOV A,R10
6003 1773          LDA #6141(B)
6005 1775          XOR R10,A
6008 1778          BTJO %60,A,A4
6011 177B          INC A
6012 177C          JNZ/JNE 9E
6014 177E          LDA #6144(B)
6017 1781          INC A
6018 1782          JZ/JEQ 03
6020 1784          MOV X40,P26
6023 1787          MOV B,R3B
6025 1789          LDA #6113(B)
6028 178C          CLR R3A
6030 178E          MOV R23,B
6032 1790          TRAP-10
6033 1791          MOV X07,P10
6036 1794          LDA #6100(B)
6039 1797          MOV A,R3A
6041 1799          INC B
6042 179A          XCHB R3B
6044 179C          LDA #6102(B)
6047 179F          INC B
6048 17A0          XCHB R3B
6050 17A2          BTJO RSA,A,1F
6053 17A5          DJNZ R10,EC
6056 17A8          SUB X07,B
6058 17AA          LDA #6223
6061 17AD          BTJZ %R20,A,08
6064 17B0          MOV R24,B
6066 17B2          TRAP-10
6067 17B3          LDA #6113(B)
6070 17B6          JN/JLT 04
6072 17B8          MOV X20,P26
6075 17B9          RETS
6076 17BC          ;<-----<<<
6080 17C0          BTJZ %40,R26,01
6081 17C1          RETS
6084 17C4          MOV X0B,P26
6086 17C6          MOV R24,B
6087 17C7          TRAP-10
6090 17CA          LDA #6113(B)
6092 17CC          AND X07,A
6094 17CF          OR R00,R26
6096 17D0          RETS
6098 17D2          MOV ROF,B
6099 17D3          TRAP-10
6102 17D6          LDA #6114(B)
6103 17D7          MOV A,B
6105 17D9          ADD X20,A
6107 17DB          AND X7F,A
6109 17DD          AND X80,B
6110 17DE          OR B,A
6112 17E0          MOV A,R25
6113 17E1          RETS
6115 17E3          MOV R24,A
6116 17E4          CLR B
6119 17E7          CALL #D609
6122 17EA          ;GO SUB1609
6126 17EE          MOV R24,B
6130 17F2          MOVD XDE53,R35

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6134 17F6
6137 17F9
6139 17FB
6142 17FE
6145 1801
6148 1804
6150 1806
6153 1809
6155 180B
6159 180F
6162 1812
6165 1815
6167 1817
6168 1818
6171 181B
6173 181D
6176 1820
6178 1822
6180 1824
6183 1827
6185 1829
6188 182C
6190 182E
6192 1830
6193 1831
6196 1834
6199 1837
6201 1839
6204 183C
6205 183D
6207 183F
6209 1841
6212 1844
6214 1846
6218 184A
6221 184D
6224 1850
6226 1852
6229 1855
6231 1857
6235 185B
6237 185D
6241 1861
6243 1863
6245 1865
6248 1868
6249 1869
6251 1870
6254 186E
6257 1871
6259 1873
6262 1874
6265 1879
6267 187B
6268 187C
6272 1880
6275 1883
6277 1885
6278 1886
6280 1888
6283 188B
6284 188C
6287 188F
6288 1890
6290 1892
6293 1895
6295 1897
6298 189A
6299 189B
6302 189E
6304 18A0
6306 18A2
6308 18A4
6311 18A7
6314 18AA
6316 18AC
6318 18AE
6321 18B1
6323 18B3
6325 18B5
6326 18B6
6329 18B9
6333 18BD
6334 18BE
6338 18C2
6341 18C5
6343 18C7
6346 18CA
6349 18CD
6351 18CF
6354 18D2
6356 18D4
6360 18D8
6363 18D8
6366 18DE
6369 18E1
6371 18E3
6375 18E7
6377 18E9
6379 18EB
6382 18EE
6384 18F0
6386 18F2
6388 18F4
6390 18F6
6393 18F9
6395 18FB
6399 18FF
6402 1902
6405 1905
6408 190B
6410 190A
6412 190C
6415 190F
6417 1911
6419 1913
6422 1916
6423 1917
6426 191A
6428 191C
6431 191F
6432 1920
6435 1923
6439 1927
6442 192A
6443 192B
6446 192E
6449 1931
6452 1934
6455 1937
6456 193B

MOV %03,P10
MOV %64,B
CALL %C31D ;GOSUB SUB31D
CALL %D631 ;GOSUB SUB1631 (GET SERIAL NUMBER DATA)
CALL %D674 ;GOSUB SUB1674
MOV %70,B
CALL %D689 ;GOSUB SUB1689
MOV %50,B
MOVD %DE35,R35
MOV %03,P10
CALL %C31D ;GOSUB SUB31D
MOV R24,B
TRAP-10
LDA %6111(B)
MOV A,R3B
LDA %6112(B)
MOV A,R3A
CLR R3E
CALL %D674 ;GOSUB SUB1674
MOV %5C,B
CALL %D689 ;GOSUB SUB1689
CLR R3D
MOV R24,B
TRAP-10
LDA %6113(B)
AND %FB,R26
AND %07,A
OR R00,R26
TSTA/CLRC
JZ/JEQ 1E
MOV %48,B
CALL %D617 ;GOSUB SUB1617
MOV %3C,B
MOVD %DE44,R35
MOV %03,P10
CALL %C31D ;GOSUB SUB31D
MOV R26,A
CALL %D687 ;GOSUB SUB16A7
JN/JLT 06
MOVD %E2B8,R35
JMP 04
MOVD %E8A5,R35
MOV %2B,B
ADD R3D,B
CALL %C31A ;GOSUB SUB31A
RETS ;<-----<<
LDA %622D
XOR R25,A
BTJO %60,A,1F
MOV R16,A
STA %624B
MOV %04,P27
MOV R24,B
TRAP-10
MOVD %624F,R35
LDA %610C(B)
STA %R35
DEC B
DEC D,R35
DJNZ R27,F5
CLR A
STA %6250
RETB ;<-----<<
MOV %FF,P2C
SUB189B
JMP 02
CLR R2C
MOV %AB,A
STA %627A
MOV %0B,P19
CLR R1A
MOV %0B,B
CALL %F990 ;GOSUB SUB3990
POP R40
PDP RJF
CLR A
STA %623F
MOVD %1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!1!!!!!!
TRAP-9
BTJJ %01,R2C,05
CALL %D5ED ;GOSUB SUB15ED
JMP 03
CALL %D5CC ;GOSUB SUB15CC
CALL %D7E1 ;GOSUB SUB17E1
MOV R26,A
CALL %D6A7 ;GOSUB SUB16A7
JN/JLT 0A
BTJO %01,R2C,03
BR %CCD7 ;GOTO SUBCD7
BR %D3C1
CALL %D5AE ;GOSUB SUB15AE
JC/JB 06
BTJO %01,R2C,F4
JMP EF
MOV R1A,A
CMPA %625F ;DIRECT COMPARISON
JNZ/JNE C6
BR %CE15 ;GOTO SUBE15
MOV %78,B
MOVD %E24F,R35
CALL %C30D ;GOSUB SUB30D
MOV R27,R3A
AND %1F,R3A
INC R3A
CLR R3E
CALL %D674 ;GOSUB SUB1674
MOV R3A,A
MOV %98,B
CALL %F0B8 ;GOSUB SUB30B8
RETB ;<-----<<
SUB18F9
LDA %679E ;REFERENCED IN TABLES 4/5
JNZ/JNE 15
MOV %21,P42
TRAP-21
MOV %01,P21
MOVD %E213,R35
CALL %C31B ;GOSUB SUB31B
TRAP-9
DJNZ R42,FC
BR %C5D3 ;GOTO SUB5D3
LDA %679B
STA %679C
CLR A
STA %679D

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6459 193B TRAP-21
6460 193C MOV X0F,P21
6463 193F MOVD XE468,R46
6467 1943 CALL @C3D4 ;GOSUB SUB3D4
6470 1946 MOVD XE16E,R35
6474 194A CALL @C31B ;GOSUB SUB31B
6477 194D TRAP-9
6478 194E MOV X04,A
6480 1950 MOV X28,B
6482 1952 CALL @D9E1 ;GOSUB SUB19E1
6485 1955 TRAP-9
6486 1956 MOV X03,A
6488 1958 MOV X3C,B
6490 195A CALL @D9E1 ;GOSUB SUB19E1
6493 195D TRAP-9
6494 195E MOV X02,A
6496 1960 MOV X50,B
6498 1962 CALL @D9E1 ;GOSUB SUB19E1
6501 1965 TRAP-9
6502 1966 MOV X01,A
6504 1968 MOV X64,B
6506 196A CALL @D9E1 ;GOSUB SUB19E1
6509 196D TRAP-9
6510 196E CLR A
6511 196F MOV X78,B
6513 1971 CALL @D9E1 ;GOSUB SUB19E1
6516 1974 TRAP-9
6517 1975 MOVD %1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!!
6521 1979 TRAP-19
6522 197A TRAP-9
6523 197B LDA @679D
6526 197E JNZ/JNE 97
6528 1980 DECD R42
6530 1982 JC/J5 03
6532 1984 BR @CE15 ;GOTO SUBE15
6535 1987 MOV R19,A
6537 1989 JNZ/JNE EF
6539 1988 MOV R1A,A
6541 198D JNZ/JNE 03
6543 198F BR @C5D3 ;GOTO SUB5D3
6546 1992 LDA @6255
6549 1995 CMP X05,A
6551 1997 JZ/JED 25
6553 1999 CMP X0A,A
6555 199B JZ/JED 02
6557 199D JMP D5
6559 199F LDA @679C
6562 19A2 CMPA @679B ;DIRECT COMPARISON
6565 19A5 JNZ/JNE 10
6567 19A7 MOVD XE204,R35
6571 19A8 MOV X21,P42
6574 19AE CALL @C31B ;GOSUB SUB31B
6577 19B1 TRAP-9
6578 19B2 DJNZ R42,FC
6581 19B5 JMP BF
6583 19B7 INC A
6584 19B8 TRAP-23
6585 19B9 STA @679C
6588 19C0 JMP BF
6590 19C8 LDA @679C
6593 19C1 SUB X05,A
6595 19C3 TRAP-23
6596 19C4 CMPA @679B ;DIRECT COMPARISON
6599 19C7 JZ/JEQ 07
6601 19C9 MPY X07,A
6603 19CB LDA @679F(B)
6606 19CE JNZ/JNE 06
6608 19D0 MOVD XE1F5,R35
6612 19D4 JMP D5
6614 19D6 LDA @679C
6617 19D9 DEC A
6618 19DA TRAP-23
6619 19DB STA @679C
6622 19DE BR @D94D
6625 19E1 MOV B,R3E
6627 19E3 MOV A,R23
6629 19E5 MOVD XE8A5,R35
6633 19E9 CALL @C31A ;GOSUB SUB31A
6636 19EC LDA @679C
6639 19EF SUB R23,A
6641 19F1 TRAP-23
6642 19F2 MPY X07,A
6644 19F4 MOV B,R23
6646 19F6 LDA @679F(B)
6649 19F9 JNZ/JNE 01
6651 19FB RETS ;<-----<<<
6652 19FC MOV R3E,B
6654 19FE TRAP-16
6655 19FF MOV R23,B
6657 1A01 ADD X06,B
6659 1A03 MOV X06,10
6662 1A06 CLR A
6663 1A07 CMPA @679F(B)
6666 1A0A JNZ/JNE 07
6668 1A0C DEC B
6669 1A0D DJNZ R10,F7
6672 1A10 MOV X2E,A
6674 1A12 TRAP-13
6675 1A13 MOV R23,B
6677 1A15 MOVD X67A0(B),R35
6681 1A19 MOV R3E,B
6683 1A1B ADD X03,B
6685 1A1D MOV R10,R3E
6688 1A20 CALL @CA8C ;GOSUB SUBABC
6691 1A23 MOV R23,B
6693 1A25 MOVD X679F(B),R35
6697 1A29 MOV R3E,R10
6700 1A2C INC R10
6702 1A2E CALL @CAB5 ;GOSUB SUBABC
6705 1A31 TRAP-15
6706 1A32 RETS ;<-----<<<
6707 1A33 JN/JLT 07
6709 1A35 CMP X0A,A
6711 1A37 JNC/JL 02
6713 1A39 SUB X0A,A
6715 1A3B RETS ;<-----<<<
6716 1A3C ADD X0A,A
6718 1A3E RETS ;<-----<<<
6719 1A3F MOV ROF,B
6721 1A41 TRAP-10
6722 1A42 LDA @611B(B)
6725 1A45 MOV A,R10
6727 1A47 CMP X30,A
6729 1A49 JNC/JL 01
6731 1A4B RETS ;<-----<<<
6732 1A4C LDA @611A(B)
6735 1A4F JNZ/JNE 01
6737 1A51 RETS ;<-----<<<
6738 1A52 CALL @DA7B ;GOSUB SUB1A7B
6741 1A55 MOV R10,A
6743 1A57 RR A

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6744 1A58 RR A
6745 1A59 RR A
6746 1A5A AND XOF,A
6748 1A5C ADD R00,B
6750 1A5E INC B
6751 1A5F XCHB R10
6753 1A61 AND X07,B
6755 1A63 LDA #C164(B) ;LOOKUP TABLE1
6758 1A66 MOV R10,B
6760 1A68 MOV A,R10
6762 1A6A LDA #679F(B)
6765 1A6D OR R10,A
6767 1A6F STA #679F(B)
6770 1A72 MOV ZFF,A
6772 1A74 STA #679E
6773 1A77 STA #679D
6778 1A7A RETB ;<-----<<<
6779 1A7B SUB1A7B MOV A,R34
6781 1A7D MOV Z09,A
6783 1A7F MPY Z07,A
6785 1A81 MOV R34,A
6787 1A83 CMPA #679F(B)
6790 1A86 JZ/JEQ 20
6792 1A88 SUB Z07,B
6794 1A8A JC/JS F7
6796 1A8C LDA #679B
6799 1A8F INC A
6800 1A90 TRAP-23
6801 1A91 STA #679B
6804 1A94 MPY Z07,A
6806 1A96 MOV R34,A
6808 1A98 STA #679F(B)
6811 1A9B CLR A
6812 1A9C ADD Z06,B
6814 1A9E MOV Z06,P34
6817 1AA1 STA #679F(B)
6820 1AA4 DEC B
6821 1AA5 DJNZ R34,F9
6824 1AA8 RETB ;<-----<<<
6825 1AA9 SUB1AA9 LDA #6796
6828 1AAC INC A
6829 1AAD TRAP-22
6830 1AAE STA #6796
6833 1AB1 CMPA #6797
6836 1AB4 JNZ/JNE 05
6838 1AB6 INC A
6839 1AB7 TRAP-22
6840 1AB8 STA #6797
6843 1AB9 LDA #679A
6846 1ABE JNZ/JNE 0B
6848 1AC0 MOV ZFF,A
6850 1AC2 STA #679A
6853 1AC5 LDA #6796
6856 1AC8 STA #6797
6859 1ACB LDA #6796
6862 1ACE MPY Z24,A
6864 1AD0 MOVD Z65C1,R35
6868 1AD4 ADD R01,R35
6871 1AD7 ADC R00,R34
6874 1ADA MOV R0F,B
6876 1ADC TRAP-10
6877 1ADD LDA #6112(B)
6880 1AE0 STA #R35
6882 1AE2 DECD R35
6884 1AE4 LDA #6111(B)
6887 1AE7 STA #R35
6889 1AE9 DECD R35
6891 1AEB MOV R0F,B
6893 1AED ADD Z02,B
6895 1AEF TRAP-10
6896 1AF0 ADD Z21,B
6898 1AF2 MOV Z22,P10
6901 1AF5 LDA #6101(B)
6904 1AFB STA #R35
6906 1AFCA DECD R35
6908 1AFD DEC B
6909 1AFD DJNZ R10,F5
6912 1B00 RETB ;<-----<<<
6913 1B01 LDA #679A ;REFERENCED IN TABLES 4/5
6916 1B04 JNZ/JNE 15
6918 1B06 MOV Z21,P42
6921 1B07 TRAP-21
6922 1B0A MOV Z01,P21
6925 1B0D MOVD ZE16,R35
6929 1B11 CALL #C318 ;GOSUB SUB318
6932 1B14 TRAP-9
6933 1B15 DJNZ R42,FC
6936 1B16 BR #C5D3 ;GOTO SUB5D3
6939 1B18 LDA #6796
6942 1B1E STA #679B
6945 1B21 STA #6797
6948 1B24 TRAP-21
6949 1B25 MOV Z07,P21
6952 1B28 MOV Z2E,A
6954 1B2A CALL #C3BD ;GOSUB SUB3BD
6957 1B2D TRAP-9
6958 1B2E LDA #6798
6961 1B31 CMPA #6797
6964 1B34 JZ/JEQ 09
6966 1B36 SUB Z01,A
6968 1B38 TRAP-22
6969 1B39 MOV Z00,B
6971 1B3B CALL #DDBC4 ;GOSUB SUB1BC4
6974 1B3E TRAP-9
6975 1B3F LDA #6798
6978 1B42 MOV Z50,B
6980 1B44 CALL #DDBC4 ;GOSUB SUB1BC4
6983 1B47 TRAP-9
6984 1B48 MOVD ZE16,R35
6988 1B4C CALL #C31B ;GOSUB SUB31B
6991 1B4F TRAP-19
6992 1B50 MOVD Z1A5E,R42 ;ODD VALUE TO LOAD !!!!!!!!
6996 1B54 TRAP-9
6997 1B55 LDA #6796
7000 1B58 CMPA #6799 ;DIRECT COMPARISON
7003 1B5B JNZ/JNE A4
7005 1B5D DECD R42
7007 1B5F JC/S 03
7009 1B61 BR #CE15 ;GOTO SUBE15
7012 1B64 MOV R19,A
7014 1B66 JNZ/JNE EC
7016 1B68 MOV R1A,A
7018 1B6A JNZ/JNE 03
7020 1B6C BR #C5D3 ;GOTO SUB5D3
7023 1B6F LDA #6235
7026 1B72 CMP Z0B,A
7028 1B74 JZ/JEQ 26
7030 1B76 CMP Z0A,A
7032 1B78 JZ/JEQ 02
7034 1B7A JMP CC
7036 1B7C LDA #6798

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7039 1B7F           ;DIRECT COMPARISON
7042 1B82
7044 1B84
7048 1B88
7051 1B8B           CALL @C318      ;GOSUB SUB318
7054 1B8E
7055 1B8F           TRAP-9
7058 1B92           DJNZ R42,FC
7060 1B94           JMP B4
7062 1B96           ADD X02,A
7063 1B97           TRAP-22
7066 1B9A           STA #6798
7068 1B9C           JMP BC
706B 1B9D           LDA #6798
7071 1B9F           CMPA #6797      ;DIRECT COMPARISON
7074 1BAC           JZ/JEQ 0E
7076 1BAC           CALL @DC02      ;GOSUB SUB1C02
7079 1B97           JNZ/JNE 07
7080 1B99           POP A
7090 1BBC           MOVW XE1CB,R35
7094 1BBC           JMP DO
7096 1BBC           LDA #6798
7099 1BBC           SUB X02,A
7101 1BBC           TRAP-22
7102 1BBC           STA #6798
7105 1BC1           BR #DB28
7108 1BC4           MOV B,R26
7110 1BC6           MOV A,R27
7112 1BC8           CALL @DC02      ;GOSUB SUB1C02
7115 1BCD           JNZ/JNE 01
7118 1BCE           RETS
7120 1BD0           CLR R3E
7123 1BD3           CALL @D674      ;GOSUB SUB1674
7125 1BD5           MOV R28,B
7127 1BD7           ADD X0D,B
7129 1BDA           CALL @D689      ;GOSUB SUB1689
7133 1BDD           SUB X1E,R46
7136 1BEO           SBB X00,R45
7138 1BE2           MOV R28,B
7141 1BE5           CALL @DC3B      ;GOSUB SUB1C83
7144 1BEB           ADD X04,R46
7147 1BEB           ADC X00,R45
7150 1BEE            MOVD R46,R35
7152 1BF0           MOV R28,B
7154 1BF2           ADD X14,B
7157 1BF5           CALL @C30D      ;GOSUB SUB30D
7158 1BF6           RETS
7160 1BF8           TRAP-22
7162 1BFA           JN/JLT 07
7164 1BFD           CMP %OE,A
7166 1BFE           JNC/JL 02
7167 1BFF           SUB %OE,A
7169 1C01           RETS
7170 1C02           ADD %OE,A
7172 1C04           RETS
7176 1C08           MPY X24,A
7179 1C0B           MOVD %65C1,R46
7182 1C0E           ADD R01,R46
7184 1C10           ADC R00,R45
7186 1C12           LDA #R46
7188 1C14           MOV A,R3A
7190 1C16           DECD R46
7192 1C18           LDA #R46
7194 1C1A           DECD R46
7196 1C1C           MOV A,R3B
7197 1C1D           OR R3A,A
7198 1C1E           RETS
7199 1C1F           LOOP1C1D
7202 1C22           MOV A,B
7203 1C23           CLR A
7205 1C25           MOV %OB,P3B
7208 1C28           ADD R01,R46
7211 1C2B           DAC R00,A
7212 1C2C           DJNZ R3B,FA
7213 1C2D           BR #F0A3
7214 1C2E           PUSH B
7217 1C31           RL B
7218 1C32           DAC R00,A
7220 1C34           DJNZ R3B,FA
7223 1C37           POP B
7224 1C38           BR #FOAF
7227 1C3B           PUSH B
7228 1C3C           LDA #R46
7230 1C3E           MOV A,B
7231 1C3F           RR A
7232 1C40           RR A
7233 1C41           AND X3F,A
7235 1C43           ADD X34,A
7237 1C45           STA #6285
7240 1C48           DECD R46
7242 1C4A           LDA #R46
7244 1C4C           RL A
7245 1C4D           RLC B
7246 1C4E           RL A
7247 1C4F           RLC B
7248 1C50           AND %OF,B
7250 1C52           MOV B,A
7251 1C53           STA #6286
7254 1C56           LDA #R46
7256 1C58           MOV A,B
7257 1C59           RR A
7258 1C5A           AND X1F,A
7260 1C5C           STA #6287
7263 1C5F           DECD R46
7265 1C61           LDA #R46
7267 1C63           RL A
7268 1C64           RLC B
7269 1C65           RL A
7270 1C66           RLC B
7271 1C67           RL A
7272 1C68           RLC B
7273 1C69           RL A
7274 1C6A           RLC B
7275 1C6B           AND %1F,B
7277 1C6D           MOV B,A
7278 1C6E           STA #6288
7281 1C71           LDA #R46
7283 1C73           MOV A,B
7284 1C74           DECD R46
7286 1C76           LDA #R46
7288 1C78           RL A
7289 1C79           RLC B
7290 1C7A           RL A
7291 1C7B           RLC B
7292 1C7C           AND %3F,B
7294 1C7E           MOV B,A
7295 1C7F           STA #6289

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LOOKS LIKE MOSTLY DATA FROM HERE TO PAGE 3 OF THE DISASSEMBLY



7688 IE08

7725 1E2D  
 7728 1E30  
 7730 1E32  
 7732 1E34  
 7735 1E37  
 7737 1E39  
 7739 1E3B  
 7741 1E3D  
 7744 1E40  
 7747 1E43  
 7750 1E46  
 7753 1E49  
 7755 1E4B  
 7756 1E4C  
 7759 1E4F  
 7762 1E52  
 7765 1E55  
 7768 1E58  
 7770 1E5A  
 7771 1E5B  
 7774 1E5E  
 7777 1E61  
 7780 1E64  
 7783 1E67  
 7784 1E68  
 7786 1E6A  
 7789 1E6D  
 7792 1E70  
 7795 1E73  
 7798 1E76  
 7801 1E79  
 7802 1E7A  
 7805 1E7D  
 7808 1E80  
 7810 1E82  
 7812 1E84  
 7815 1E87  
 7816 1E88  
 7818 1E8A  
 7819 1E8B  
 7822 1E8E  
 7825 1E91  
 7827 1E93  
 7830 1E96  
 7832 1E98  
 7834 1E9A  
 7837 1E9D  
 7840 1EAO  
 7842 1EA2  
 7845 1EAS  
 7846 1EA6  
 7848 1EAB  
 7850 1EAA  
 7853 1EAD  
 7855 1EAF  
 7858 1EB2  
 7860 1EB4  
 7863 1EB7  
 7865 1EB9  
 7867 1EBB  
 7870 1EBE  
 7873 1EC1  
 7876 1EC4  
 7877 1EC5  
 7878 1EC6  
 7880 1EC8  
 7883 1ECB  
 7885 1ECD  
 7889 1ED1  
 7892 1ED4  
 7895 1ED7  
 7898 1EDA  
 7900 1EDC  
 7903 1EDF  
 7906 1EE2  
 7907 1EE3  
 7909 1EE5  
 7912 1EE8  
 7915 1EEB  
 7918 1EEE  
 7921 1EF1  
 7923 1EF3  
 7926 1EF4  
 7927 1EF7  
 7930 1EFA  
 7934 1EFE  
 7936 1FO0  
 7939 1FO3  
 7941 1FO5  
 7942 1FO6  
 7945 1FO9  
 7948 1FOC  
 7951 1FOF  
 7954 1F12  
 7956 1F14  
 7957 1F15  
 7960 1F18  
 7962 1F1A  
 7963 1F1B  
 7966 1F1E  
 7968 1F20  
 7969 1F21  
 7972 1F24  
 7975 1F27  
 7977 1F29  
 7978 1F2A  
 7981 1F2D  
 7983 1F2F  
 7986 1F32  
 7988 1F34  
 7990 1F36  
 7992 1F38  
 7995 1F3B  
 7998 1F3E  
 7999 1F3F  
 8001 1F41  
 8003 1F43  
 8006 1F46  
 8009 1F49  
 8011 1F4B  
 8012 1F4C  
 8014 1F4E  
 8015 1F4F  
 8016 1F50  
 8017 1F51  
 8020 1F54  
 8022 1F56  
 8025 1F59  
 8028 1F5C  
 8030 1F5E  
 8033 1F61

MOV R1C,R10  
 SBB RAE,B  
 DJNZ A,EB  
 CALL #8824(B)  
 XOR X59,B  
 DECD RAE  
 DJNZ A,EB  
 CALL #BAEB(B)  
 CALL #BAEB(B)  
 CALL #8940(B)  
 BTJO R21,A,01  
 CMPA #RBA ;LOOKS BOGUS  
 TRAP-20  
 CALL #BAEB(B)  
 CALL #BAEB(B)  
 CALL #8825(B)  
 Data or Text 04,0C,85  
 CMPA #RBA ;LOOKS BOGUS  
 TRAP-20  
 CALL #BAEB(B)  
 CALL #BAEB(B)  
 CALL #8941(B)  
 Data or Text 03,21,67  
 DAC B,A  
 DJNZ A,EB  
 CALL #BAEB(B)  
 CALL #BAEB(B)  
 CALL #8941(B)  
 Data or Text 03,21,6B  
 MOVD R11,R42  
 EINT  
 Data or Text 20,20,16  
 Data or Text 21,14,1D  
 DJNZ A,EB  
 MOVP B,PS1  
 Data or Text 11,94,00  
 DECD B  
 ORP B,P01  
 MOV B,A  
 Data or Text 10,1A,EB  
 CALL #8925(B)  
 INV ROB  
 Data or Text 70,15,12  
 JP/JST 80  
 XOR X56,B  
 Data or Text 51,50,3B  
 CALL #8925(B)  
 INV ROB  
 Data or Text 70,15,12  
 TRAP-20  
 MOVP B,P01  
 XOR X57,B  
 XOR R40,REE  
 DJNZ A,EB  
 CALL #BAE4(B)  
 MOVP PS5,A  
 BTJO X51,B,50  
 SBB RAE,B  
 DJNZ A,EB  
 CALL #7D04(B)  
 BTJO X85,B,44  
 Data or Text 11,5C,61  
 TRAP-17  
 PUSH A  
 XOR X04,A  
 Data or Text 0C,85,AF  
 DJNZ A,EB  
 MOVD X4054,R54  
 Data or Text 30,05,88  
 XOR ROB,R8B  
 BTJO XEB,B,AE  
 DJNZ A,EB  
 Data or Text 90,43,6B  
 CALL #0180(B)  
 POP ST  
 MPY X00,A  
 SBB R12,REB  
 CALL #BAEB(B)  
 Data or Text 99,01,5B  
 CALL #2100(B)  
 MOVP PS1,B  
 Data or Text 41,02,5A  
 TRAP-20  
 CALL #85DB(B)  
 MOVD X4155,R80  
 MPY X80,A  
 BTJO R21,A,14  
 DAC X84,A  
 TRAP-20  
 CALL #89DB(B)  
 BTJZF B,P40,85  
 CALL #8445(B)  
 BTJDF B,P21,01  
 XORP B,PSA  
 TRAP-20  
 CALL #8DDB(B)  
 ORP B,P01  
 MOV B,A  
 Data or Text 10,1A,E0  
 ORP A,P20  
 DEC A  
 Data or Text 10,1A,EB  
 CALL #91DB(B)  
 ORP B,P01  
 MOV B,A  
 Data or Text 10,1A,E4  
 MOVP PS5,A  
 BTJO X51,B,50  
 SBB RAE,B  
 XORP B,PSB  
 MOVP B,PSD  
 Data or Text 40,87,01  
 Data or Text 51,2E,4B  
 EINT  
 XOR X63,B  
 XOR R03,A  
 Data or Text 99,DB,82  
 Data or Text 50,40,CB  
 SUB XEO,B  
 PUSH B  
 XOR #22,B  
 MOV B,A  
 SBC B,A  
 TRAP-20  
 CALL #8DDB(B)  
 MOVP B,PSD  
 Data or Text 40,87,01  
 Data or Text 51,2E,1C  
 XORP A,PS6  
 XOR R46,REE  
 Data or Text A1,DB,83

14 10 2 OR RID: B

— Call — — — — 1235

IF34

A/B

IF61



8036 1F64  
 8037 1F65  
 8040 1F68  
 8043 1F6B  
 8044 1F6C  
 8047 1F6F  
 8050 1F72  
 8052 1F74  
 8053 1F77  
 8058 1F7A  
 8059 1F7B  
 8062 1F7E  
 8065 1F81  
 8068 1F84  
 8070 1F86  
 8071 1F87  
 8072 1F88  
 8074 1F8A  
 8077 1F8D  
 8080 1F90  
 8083 1F93  
 8085 1F95  
 8086 1F96  
 8087 1F97  
 8089 1F99  
 8092 1F9C  
 8095 1F9F  
 8098 1FA2  
 8100 1FA4  
 8101 1FA5  
 8102 1FA6  
 8104 1FAB  
 8108 1FAC  
 8111 1FAF  
 8114 1FB2  
 8116 1FB4  
 8117 1FB5  
 8119 1FB7  
 8123 1FB8  
 8125 1FB9  
 8127 1FBF  
 8129 1FC1  
 8130 1FC2  
 8131 1FC3  
 8134 1FC6  
 8136 1FC8  
 8137 1FC9  
 8140 1FCG  
 8142 1FCE  
 8143 1FD1  
 8146 1FD2  
 8147 1FD3  
 8148 1FD4  
 8150 1FD6  
 8152 1FD8  
 8153 1FD9  
 8158 1FDE  
 8160 1FE0  
 8163 1FE3  
 8166 1FE6  
 8167 1FE7  
 8170 1FEA  
 8173 1FED  
 8175 1FFC  
 8176 1FFD  
 8178 1FF2  
 8179 1FF3  
 8182 1FF6  
 8185 1FF9  
 8188 1FFC  
 8190 1FFE  
 8193 2001  
 8196 2004  
 8197 2005  
 8200 2008  
 8203 2008  
 8205 200D  
 8206 200E  
 8208 2010  
 8209 2011  
 8212 2014  
 8215 2017  
 8217 2019  
 8218 201A  
 8220 201C  
 8222 201E  
 8223 2021  
 8226 2022  
 8228 2024  
 8231 2027  
 8234 202A  
 8237 202D  
 8238 202E  
 8240 2030  
 8242 2032  
 8245 2035  
 8248 2038  
 8251 203B  
 8252 203C  
 8253 203D  
 8254 203E  
 8257 2041  
 8260 2044  
 8263 2047  
 8264 2048  
 8266 204A  
 8269 204D  
 8272 2050  
 8275 2053  
 8278 2056  
 8280 2058  
 8281 2059  
 8284 205C  
 8287 205F  
 8290 2062  
 8293 2065  
 8294 2066  
 8296 2068  
 8299 206B  
 8302 206E  
 8305 2071  
 8307 2073  
 8310 2076  
 8313 2079  
 8315 207B  
 8317 207D  
 8320 2080  
 8322 2082  
 8325 2085  
 8327 2087  
 8329 2089

(1F70)

(1F7F)

(1F8E)

(1F90)

(1FAC)

(1F09)

(1FE8)

(1FF7) A, B

(2006) A, B

(2033) A, B

(2042) A, B

(2051)

2060



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8332 208C CALL #BAEB(B)
8335 208F CALL $1105(B)
8338 2092 ORP A,P52
8340 2094 JMP 2E
8342 2096 Data or Text 40,46,6E
8345 2099 DJNZ A,EB
8347 209B CALL #BAE5(B)
8350 209E Data or Text 04,11,05
8353 20A1 ORP A,P52
8355 20A3 TRAP-20
8356 20A4 BTJOP B,P1C,4B
8359 20A7 Data or Text 70,11,9B
8362 20A9 CALL #BAEB(B)
8365 20AD CALL #BAOD(B)
8368 20B0 ADD B,A
8369 20B1 PUSH A
8370 20B2 MOV R06,B
8372 20B4 Data or Text 21,65,6E
8375 20B7 DJNZ A,EB
8377 20B9 CALL #BAEB(B)
8380 20BC CALL #BA1D(B)
8383 20BF ADD B,A
8384 20C0 PUSH A
8385 20C1 MOV R06,B
8387 20C3 Data or Text 21,65,6E
8390 20C6 DJNZ A,EB
8392 20CB CALL #BAEB(B)
8395 20CB CALL #45B5(B)
8398 20CE CLR RBA
8400 20D0 TSTB
8401 20D1 Data or Text 10,38,43
8404 20D4 MPY XBA,A
8406 20D6 TRAP-20
8407 20D7 CALL #BAE1(B)
8410 20DA Data or Text 51,52,E6
8413 20DD Data or Text 04,30,81
8416 20E0 ADD R08,R05
8419 20E3 MOVD X4508,RA
8423 20E7 DJNZ A,EL A, B
8425 20E9 MOV B,A
8426 20EA BTJD #200,B,44
8429 20ED Data or Text 11,0B,82
8432 20F0 MPY R04,A
8434 20F2 DINT
8435 20F3 Data or Text 10,3B,AE
8438 20F6 POP A
8439 20F7 Data or Text 61,C4,B9
8442 20FA IDLE
8443 20FB ADC RB9,A
8445 20FD Data or Text 20,15,35
8448 2100 ORP B,P54
8450 2102 LDSP
8451 2103 SBB XAE,B
8453 2105 DJNZ A,E6
8455 2107 OR R50,R4B
8458 210A ANDP A,P20
8460 210C Data or Text 51,44,50
8463 210F OR R16,R76
8466 2112 TRAP-20
8467 2113 CALL #4805(B)
8470 2116 XOR %65,B
8472 2118 XOR R03,A
8474 211A POP A
8475 211B Data or Text 04,56,88
8478 211E Data or Text 21,CO,40
8481 2121 Data or Text 61,03,7E
8484 2124 JP/JST BO
8486 2126 ADD R47,A
8488 2128 DAC B,A
8489 2129 DJNZ A,EB
8491 212B CALL #BAEB(B)
8494 212E CALL #BAEB(B)
8497 2131 Data or Text AF,7E,E4
8500 2134 BTJZ R30,A,11
8503 2137 OR RB9,A
8505 2139 OR B,A
8506 213A Data or Text 51,8B,B0
8509 213D OR R18,A
8511 213F SBB RAF,R7E
8514 2142 TRAP-20
8515 2143 CALL #411B(B)
8518 2146 CALL #3045(B)
8521 2149 XOR %00,B
8523 214B Data or Text 61,15,8A
8526 214E TRAP-20
8527 214F Data or Text AF,7E,E4
8530 2152 Data or Text 11,B9,01
8533 2155 ADC R11,A
8535 2157 SBB RBC,R11
8538 215A XOR %40,B
8540 215C ADD R48,A
8542 215E Data or Text AF,7E,E4
8545 2161 Data or Text 11,B7,12
8548 2164 INC B
8549 2165 Data or Text 11,4B,8C
8552 2168 Data or Text 11,55,40
8555 216B ADD R48,A
8557 216D Data or Text AF,7E,EB
8560 2170 CALL #BAEC(B)
8563 2173 CALL #8715(B)
8566 2176 DAC XBB,A
8568 2178 SBB RAE,B
8570 217A DJNZ A,EB
8572 217C Data or Text AF,7E,EC
8575 217F RRC A
8576 2180 DECD A
8577 2181 DBB R6E,B
8579 2183 ADD R01,R84
8582 2186 POP A
8583 2187 EINT
8584 2188 RR B
8585 2189 Data or Text 04,45,2F
8588 218C DAC XE1,R10
8591 218F ADD X45,B
8593 2191 DAC X58,A
8595 2193 Data or Text 71,2E,50
8598 2196 EINT
8599 2197 MOVD X406B,RAF
8603 219B CMP Z20,R13
8606 219E XOR %94,B
8608 21A0 OR X0D,B
8610 21A2 DECD RAE
8612 21A4 DJNZ A,EB
8614 21A6 CALL #BAEB(B)
8617 21A7 Data or Text AF,7C,44
8620 21AC BTJO R11,A,B
8623 21AF BTJOP B,P1C,4B
8626 21B2 MOVP B,P5D
8628 21B4 Data or Text 40,87,01
8631 21B7 Data or Text 51,2F,7E
8634 21B8 TRAP-20

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[ 2123 ]

[ 2132 ]

[ 2141 ]

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[ 216E ]

[ 217D ]

[ 218C ]

[ 219B ]

[ 21A7 ]

[ 21B9 ]

[ 21C6 ]



8635 21BB Data or Text 99,51,14  
 8638 21BE DINT  
 8639 21BF POP A  
 8640 21C0 Data or Text 20,15,35  
 8643 21C3 ORP B,PS4  
 8645 21C5 PUSH ST  
 8646 21C6 TRAP-20  
 8647 21C7 Data or Text AF,7E,E4  
 8650 21CA Data or Text 11,89,12  
 8653 21CD INC B  
 8654 21CE Data or Text 11,4B,87  
 8657 21D1 Data or Text 21,33,91  
 8660 21D4 Data or Text 51,BB,AF  
 8663 21D7 ADC XE4,R11  
 8666 21DA POP A  
 8667 21DB IDLE  
 8668 21DC ADC R11,A  
 8670 21DE SBB R97,R21  
 8673 21E1 XOR Z91,B  
 8675 21E3 Data or Text 51,BB,AF  
 8678 21E6 DAC XEB,RAE  
 8681 21E9 Data or Text 41,1B,92  
 8684 21EC CMP Z40,B  
 8686 21EE BTJZP A,P01,51  
 8687 21F1 XOR RBA,A  
 8691 21F3 TRAP-20  
 8692 21F4 Data or Text AF,7E,E4  
 8695 21F7 Data or Text 11,89,12  
 8696 21FA INC B  
 8699 21FB Data or Text 11,4B,94  
 8702 21FE Data or Text 11,24,34  
 8703 2201 SUB XEB,B  
 8707 2203 Data or Text AF,7E,E4  
 8710 2206 Data or Text 11,89,01  
 8713 2209 ADC R11,A  
 8715 220B SBB R94,R11  
 8720 2210 DR X54,A  
 8729 2219 SUB XEB,B  
 8722 2212 Data or Text AF,7D,04  
 8725 2215 BTJO Z1C,B,B4  
 8732 221C DINT  
 8731 221B POP A  
 8732 221C DR B,A  
 8733 221F DAC B,A  
 8738 2222 Data or Text 50,44,91  
 8740 2224 Data or Text 51,6B,AF  
 8743 2227 DJNZ A,EB  
 8745 2229 CALL @OC03(B)  
 8747 222B MOV PBA,A  
 8750 222E JPZ/JBE 04  
 8752 2230 ADC R15,R16  
 8755 2233 DJNZ A,EB  
 8758 2236 CALL @BAE4(B)  
 8759 2237 BTJZP B,R50,21  
 8761 2239 MOV B,A  
 8764 223C ON X4B,B  
 8766 223E BTJZP A,P21,55  
 8767 223F MOVVP P51,B  
 8770 2242 DECD A  
 8771 2243 CALL @BB12(B)  
 8772 2244 MOV B,A  
 8775 2247 POP ST  
 8777 2249 ORP X57,PSA  
 8778 224A JZ/JEQ 10  
 8781 224D PUSH A  
 8783 224F Data or Text 41,4B,10  
 8784 2250 XOR ZAE,A  
 8787 2253 PUSH A  
 8790 2256 Data or Text 02,D6,11  
 8793 2259 DR R00,R58  
 8796 225C SBB RAE,R49  
 8799 225F DR R46,R50  
 8800 2260 Data or Text 03,2E,BA  
 8802 2262 TRAP-20  
 8804 2264 MOVVP P42,B  
 8805 2265 JMP 87  
 8805 2265 IDLE  
 8806 2268 Data or Text 04,04,2E  
 8807 2269 TRAP-20  
 8812 226C CALL @BAE4(B)  
 8815 226F DAC Z58,A  
 8817 2271 Data or Text 71,2E,40  
 8820 2274 BTJO R96,R89,23  
 8824 2278 Data or Text 11,19,40  
 8827 227B Data or Text 0C,BA,E1  
 8830 227E Data or Text 51,52,E5  
 8833 2281 BTJZP A,P21,55  
 8836 2284 MOVVP B,P51  
 8838 2286 Data or Text 11,94,00  
 8841 2289 DECD B  
 8842 228A CALL @DAE8(B) ;BOSUB  
 8845 228D CALL @B925(B)  
 8848 2290 Data or Text 04,60,B1  
 8851 2293 ADC RB9,A  
 8853 2295 Data or Text 11,5D,BA  
 8856 2298 TRAP-20  
 8857 2299 XCMB A  
 8859 229A Data or Text 50,05,88  
 8861 229D Data or Text 40,6B,82  
 8864 22A0 Data or Text 10,82,C8  
 8867 22A3 Data or Text 40,67,6E  
 8870 22A6 DJNZ A,EB  
 8872 22A8 CALL @4944(B)  
 8875 22AB BTJO R50,R03,2E  
 8879 22AF Data or Text 50,05,88  
 8882 22B2 Data or Text 40,67,6E  
 8885 22B5 DJNZ A,EB  
 8887 22B7 CALL @D925(B)  
 8890 22B8 Data or Text 11,19,40  
 8893 22BD Data or Text 0C,88,B4  
 8896 22C0 MOV R28,R40  
 8899 22C3 TRAP-17  
 8900 22C4 XOR R75,RB6  
 8903 22C7 POP A  
 8904 22C8 XOR X11,A  
 8906 22CA ADC R40,A  
 8908 22CC Data or Text 0C,BB,B4  
 8911 22CF MOV R28,R40  
 8914 22D2 TRAP-17  
 8915 22D3 XOR R75,RAE  
 8918 22D6 LDSP  
 8919 22D7 Data or Text 71,2E,59  
 8922 22DA SBB RAE,A  
 8924 22DC Data or Text 50,05,88  
 8927 22DF Data or Text 40,6B,8B  
 8930 22E2 Data or Text 11,81,0B  
 8933 22E5 DECD A  
 8936 22E8 DBB R6E,B  
 8937 22E9 XOR R4B,RAC  
 8939 22EB



8942 22EE Data or Text 11,05,84  
 8945 22F1 MOV XCB,B  
 8947 22F3 Data or Text AF,7E,EB  
 8950 22F6 CALL #BAEB(B)  
 8953 22F9 Data or Text 04,41,61  
 8956 22FC OR R82,A  
 8958 22FE TRAP-20  
 8959 22FF CALL #BAEB(B)  
 8962 2302 Data or Text AF,7E,E4  
 8965 2305 ORP B,F11  
 8967 2307 XOR XDE,B  
 8969 2309 TSTA/CLRC  
 8970 230A OR R16,R11  
 8973 230D SBD R2E,R59  
 8976 2310 SBB RAF,A  
 8978 2312 DAC XE0,R91  
 8981 2315 Data or Text 40,52,14  
 8984 2318 MOV RE4,B  
 8986 231A BTJZB EXP50,21  
 8989 231D MOV B,A A,B  
 8990 231E OR XAE,B  
 8992 2320 Data or Text AF,5D,02  
 8995 2323 BTJD R76,A,EB  
 8998 2326 CALL #BAEB(B)  
 9001 2329 CALL #BAEB(B)  
 9004 232C CALL #BAEB(B)  
 9007 232F CALL #5481(B)  
 9010 2332 Data or Text 90,00,BB  
 9013 2335 STA \$1181  
 9016 2338 RETI  
 9017 2339 BTJD XEB,RAE,BA  
 9021 233D TRAP-20  
 9022 233E CALL #5445(B)  
 9025 2341 ADD R20,A  
 9027 2343 Data or Text 21,2E,20  
 9030 2346 BTJZ R6E,B,BA  
 9033 2349 TRAP-20  
 9034 234A CALL #BAEB(B)  
 9037 234D CALL #2D10(B)  
 9040 2350 MOVP P58,A  
 9042 2352 ORP A,P50  
 9044 2354 BTJD XEB,RAE,BA  
 9048 2358 TRAP-20  
 9049 2359 CALL #BAEB(B)  
 9052 235C CALL #5445(B)  
 9055 235F CALL #BAEB(B)  
 9058 2362 CALL #4113(B)  
 9061 2365 CALL #5445(B)  
 9064 2368 CALL #4114(B)  
 9067 236B Data or Text 04,B9,01  
 9070 236E Data or Text 04,0D,5B  
 9073 2371 MOVP P5D,A  
 9075 2373 Data or Text 61,D1,50  
 9078 2376 BTJZB A,P00,5B  
 9081 2379 ORP A,P50  
 9083 237B BTJD XEB,R90,46  
 9087 237F TRAP-20  
 9088 2380 CALL #BAE6(B)  
 9091 2383 POP ST  
 9092 2384 Data or Text 0C,44,42  
 9095 2387 Data or Text 21,21,C4  
 9098 238A MOV XE5,B  
 9100 238C ADD R19,R00  
 9103 238F RETI  
 9104 2390 RLC RBB  
 9106 2392 TRAP-23  
 9107 2393 XORP XDF,PCA  
 9110 2396 TRAP-23  
 9111 2397 XORP XEB,PAS  
 9114 239A JMP 15  
 9116 239C TRAP-23  
 9117 239D XORP XE0,P24  
 9120 23A0 TRAP-23  
 9121 23A1 XORP XE0,P6F  
 9124 23A4 RL RBF  
 9126 23A6 TRAP-23  
 9127 23A7 XORP XEB,PAS  
 9130 23AA TRAP-23  
 9131 23AB XORP XE0,P8A  
 9134 23AE JMP C7  
 9136 23B0 TRAP-23  
 9137 23B1 XORP XE1,P9B  
 9140 23B4 JMP 8D  
 9142 23B6 RL RBF  
 9144 23B8 TRAP-23  
 9145 23B9 XORP XEB,PAS  
 9148 23BC TRAP-23  
 9149 23BD XORP XE0,PAB  
 9152 23C0 JMP C9  
 9154 23C2 TRAP-23  
 9155 23C3 XORP XE1,P9B  
 9158 23C6 JMP 7E  
 9160 23CB RL R80  
 9162 23CA RL RAD  
 9164 23CC TRAP-23  
 9165 23CD XORP XEB,PAS  
 9168 23D0 JMP BA  
 9170 23D2 JMP C9  
 9172 23D4 TRAP-23  
 9173 23D5 XORP XE1,P9B  
 9176 23D8 JMP 8D  
 9178 23DA RL R80  
 9180 23DC RL RAD  
 9182 23DE TRAP-23  
 9183 23DF XORP XEB,PAS  
 9186 23E2 JMP AB  
 9188 23E4 JMP C9  
 9190 23E6 TRAP-23  
 9191 23E7 XORP XE1,P9B  
 9194 23EA JMP 9C  
 9196 23EC RL RAD  
 9198 23EE JMP D8  
 9200 23F0 TRAP-23  
 9201 23F1 XORP XEB,PAS  
 9204 23F4 JMP AB  
 9206 23F6 JMP C9  
 9208 23FB TRAP-23  
 9209 23F9 XORP XE1,P9B  
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 9216 2400 TRAP-23  
 9217 2401 XORP XDE,P80  
 9220 2404 RL RAD  
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 9228 240C TRAP-23  
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 9236 2414 RL R9E



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259C

2605



9809 2651 Data or Text 11,05,45  
 9812 2654 Data or Text 41,2E,58  
 9815 2657 Data or Text 71,2E,49  
 9818 265A DR R46,R50  
 9821 265D Data or Text 03,2E,BA  
 9824 2660 TRAP-20  
 9825 2661 CALL #BAEB(B)  
 9828 2664 XORP B,P08  
 9830 2666 EINT  
 9831 2667 BTJO R56,A,DB  
 9834 266A CALL \$1105(B)  
 9837 266D ORP A,P52  
 9839 266F JPZ/JGE B7  
 9841 2671 MOV REB,A  
 9843 2673 ORP B,P11  
 9845 2675 XOR RC4,B  
 9847 2677 XOR X61,B  
 9849 2679 Data or Text 03,89,20  
 9852 267C XOR R55,A  
 9855 267E ORP B,P54  
 9856 2680 PUSH ST  
 9857 2681 JMP 10  
 9859 2683 PUSH ST  
 9860 2684 JP/JST 94  
 9862 2686 Data or Text 11,55,6E  
 9863 2689 DJNZ A,E5  
 9867 268B BTJZP A,P12,EB  
 9870 268E Data or Text 04,41,61  
 9873 2691 OR R82,A  
 9875 2693 JZ/REQ B4  
 9877 2695 DAC B,A  
 9878 2696 DECD RAE  
 9880 2698 DJNZ A,EB  
 9882 269A CALL #BAEB(B)  
 9885 269D CALL #BAEB(B)  
 9888 26A0 CALL #BAEB(B)  
 9891 26A3 CALL #BAEB(B)  
 9894 26A6 CALL #5D51(B)  
 9897 26A9 DAC X5B,A  
 9899 26AB Data or Text 71,2E,B0  
 9902 26AE Data or Text 20,10,08  
 9905 26B1 MOV REC,RB8  
 9908 26B4 Data or Text A1,1B,BA  
 9911 26B7 JPZ/JGE 91  
 9913 26B9 PUSH A  
 9914 26BA Data or Text 31,0B,11  
 9917 26BD Data or Text 61,2E,B9  
 9920 26C0 XORP B,P11  
 9922 26C2 Data or Text 40,6B,AE  
 9925 26C5 DJNZ A,EB  
 9927 26C7 CALL #BAEB(B)  
 9930 26CA ANDP A,P20  
 9932 26CC MOV B,A  
 9933 26CD BTJO R56,A,DB  
 9936 26D0 CALL #BAEB(B)  
 9939 26D3 CALL #BAE1(B)  
 9942 26D6 Data or Text 10,58,45  
 9945 26D9 DAC X02,A  
 9947 26DB TRAP-20  
 9948 26DC ANDP XD4,P32  
 9951 26DF DINT  
 9952 26E0 Data or Text 21,68,AE  
 9955 26E3 Data or Text 41,73,01  
 9958 26E6 Data or Text 11,48,AE  
 9961 26E9 ADC X1B,B  
 9963 26EB XORP A,P21  
 9965 26ED NOP  
 9966 26EE TRAP-17  
 9967 26EF ADD X70,B  
 9969 26F1 BTJO R4B,A,01  
 9972 26F4 ORP A,PB6  
 9974 26F6 TRAP-20  
 9975 26F7 ORP A,P41  
 9977 26F9 Data or Text 61,14,BA  
 9980 26FC RR B  
 9981 26FD TRAP-19  
 9982 26FE PUSH A  
 9983 26FF OR X5A,B  
 9985 2701 ADD X71,B  
 9987 2703 DAC X40,A  
 9989 2705 BTJO R96,RB9,20  
 9993 2709 DINT  
 9994 270A MOV RE4,A  
 9996 270C OR X8A,B  
 9998 270E RR B  
 9999 270F BR #BB54(B)  
 10002 2712 OR X89,B  
 10004 2714 Data or Text 61,C4,B8  
 10007 2717 TSTA/CLRC  
 10008 2718 XOR RSA,A  
 10010 271A JP/JST B0  
 10012 271C ADD R4B,A  
 10014 271E DAC B,A  
 10015 271F DJNZ A,EB  
 10017 2721 BTJZP B,P54,4B  
 10020 2724 BR #B004(B)  
 10023 2727 Data or Text 02,10,BB  
 10026 272A DAC X57,A  
 10028 272C BBB RAE,A  
 10030 272E POP A  
 10031 272F XOR X91,B  
 10033 2731 SUB RE0,R2E  
 10036 2734 ADD R01,R84  
 10037 2737 POP A  
 10040 2738 Data or Text 51,00,50  
 10043 273B Data or Text 21,ED,BA  
 10046 273E TRAP-20  
 10047 273F CALL #BAEB(B)  
 10050 2742 CALL #BAEB(B)  
 10053 2745 CALL #BAEB(B)  
 10056 2748 CALL #BAEB(B)  
 10059 274B CALL #1512(B)  
 10062 274E DECD B  
 10063 274F XOR R9B,RAE  
 10066 2752 ADD X71,B  
 10068 2754 DAC X30,A  
 10070 2756 OR R17,R56  
 10073 2759 JMP 18  
 10075 275B ADC R44,R4C  
 10078 275E ADC R61,R03  
 10081 2761 PUSH A  
 10082 2762 ORP A,P2E  
 10084 2764 XOR R40,RC4  
 10087 2767 MOV XE5,B  
 10089 2769 MOVP PBB,B  
 10091 276B Data or Text 21,C0,40  
 10094 276E Data or Text 61,2E,B9  
 10097 2771 Data or Text 61,C4,B9  
 10100 2774 Data or Text 40,16,21  
 10103 2777 IDLE  
 10104 277B CALL #BAEB(B)

266B

26D4

273D



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 10225 27F1  
 10226 27F2  
 10229 27F5  
 10232 27F8  
 10234 27FA  
 10236 27FC  
 10239 27FF  
 10241 2801  
 10242 2802  
 10243 2803  
 10246 2806  
 10249 2809  
 10252 280C  
 10254 280E  
 10257 2811  
 10259 2813  
 10261 2815  
 10264 2818  
 10266 281A  
 10268 281C  
 10272 2820  
 10273 2821  
 10276 2824  
 10278 2826  
 10280 2828  
 10282 282A  
 10284 282C  
 10285 282D  
 10286 282E  
 10287 282F  
 10289 2831  
 10291 2833  
 10293 2835  
 10296 2838  
 10297 2838  
 10300 283C  
 10302 283E  
 10303 2841  
 10308 2844  
 10309 2843  
 10310 2846  
 10311 2847  
 10312 2848  
 10313 2849  
 10315 284B  
 10317 284D  
 10319 284F  
 10320 2850  
 10321 2851  
 10322 2852  
 10325 2855  
 10328 2858  
 10329 2859  
 10332 285C  
 10333 285D  
 10336 2860  
 10338 2862  
 10340 2864  
 10343 2867  
 10345 2869  
 10346 286A  
 10348 286C  
 10349 286D  
 10352 2870  
 10355 2873  
 10356 2874  
 10357 2875  
 10360 2878  
 10362 287A  
 10365 287D  
 10368 2880  
 10371 2883  
 10374 2886  
 10377 2889  
 10380 288C  
 10383 288F

*A,B*

2797

280F

2887



```

10385 2891 DECD B
10386 2892 BTJOP B,P46,EB
10389 2895 CALL #B8C0(B)
10392 2898 RETS ;-----<<<
10393 2899 MOV RES,A
10395 2898 BTJZP A,P12,E4
10396 289E BTJZP B,P50,21
10401 28A1 MOV B,A
10402 28A2 OR XAB,B
10404 28A4 DAC B,A
10405 28A5 DJNZ A,EB
10407 28A7 CALL #B8AE5(B)
10410 28A8 CALL #B8AE8(B)
10413 28AD CALL #B8AE5(B)
10416 28B0 CALL #B8AE8(B)
10419 28B3 CALL #B8AE5(B)
10422 28B6 CLR R12
10424 28B8 TRAP-20
10425 28B9 Data or Text 02,01,00
10428 28BC ORP A,P2E
10430 28BE DECD B
10431 28BF CALL #4548(B)
10434 28C2 CALL #B8AE8(B)
10437 28C3 BR #6081(B)
10440 28C8 ADC RB2,A
10442 28CA JPZ/JSE 91
10444 28CC PUSH A
10445 28CD BTJOP R88,RS8,EB
10449 28D1 CALL #B8AE6(B)
10452 28D4 ADD RS8,R74
10455 28D7 BTJZ X5A,B,E4
10458 28DA BTJZP B,P50,21
10461 28DD MOV B,A
10462 28DE OR XAB,B
10464 28E0 DAC B,A
10465 28E1 DJNZ A,EB
10467 28E3 CALL #B8AE8(B)
10470 28E6 CALL #B8AE8(B)
10473 28E9 CALL #B8AE8(B)
10476 28EC CALL #B8AE8(B)
10479 28EF CALL #B8AE5(B)
10482 28F2 CLR R12
10484 28F4 TRAP-20
10485 28F5 AND RB2,B
10487 28F7 JPZ/JSE 91
10489 28F9 POP A
10490 28FA Data or Text 40,08,54
10493 28FD SBB RAE,RS9
10496 2900 Data or Text 61,C4,B9
10499 2903 Data or Text 40,16,21
10502 2906 IDLE
10503 2907 CALL #0842(B)
10506 290A RETI
10507 290B Data or Text 21,01,AE
10510 290E POP A
10511 290F XOR R2E,A
10513 2911 INC A
10514 2912 SBB X2E,A
10516 2914 ADC X1B,B
10518 2916 STA #8571
10521 2919 OR RB8,A
10523 291B XORP A,PA0
10525 291D DJNZ A,EB
10527 291F BTJZP B,P54,4B
10530 2922 BR #1105(B)
10533 2925 ORP A,P52
10535 2927 DECD B
10536 2928 BTJOP B,P46,EB
10537 292B CALL #B8AE8(B)
10542 292E CALL #B8B24(B)
10545 2931 Data or Text 50,58,84
10548 2934 BTJZ R12,A,DB
10551 2937 CALL #B8AE8(B)
10554 293A CALL #B8AE8(B)
10557 293D CALL #B8AE8(B)
10560 2940 CALL #B8AE8(B)
10563 2943 CALL #B8AE8(B)
10566 2946 CALL #B8AE8(B)
10569 2949 CALL #B8B05(B)
10572 294C INC B
10573 294D Data or Text 21,1B,8C
10576 2950 OR R31,R2E
10579 2953 OR %42,B
10581 2955 INV B
10582 2956 STSP
10583 2957 XOR B,A
10584 2958 DAC B,A
10585 2959 PUSH A
10586 295A MOV R16,R1C
10589 295D XOR R2E,RS8
10592 2960 Data or Text 71,2E,49
10593 2963 MOV ROC,RO1
10596 2966 BTJD REE,RBA,E4
10602 296A OR %87,B
10604 296C Data or Text 61,C4,B8
10607 296F Data or Text 02,06,11
10610 2972 OR RO0,RS8
10613 2973 SBB RAE,RBA
10616 2978 JP/JST 94
10618 297A OR R65,RO0
10621 297D MOV R65,B
10623 297F BTJZ R11,ROB,96
10627 2983 XOR B,A
10628 2984 SBB RAE,A
10630 2986 PUSH A
10631 2987 EINT
10632 2988 INC B
10633 2989 Data or Text 21,1B,92
10634 298C Data or Text 51,11,94
10639 298F NOP
10640 2990 CLR B
10641 2991 DAC B,A
10642 2992 IDLE
10643 2993 Data or Text 41,2E,BA
10646 2996 JMP 44
10648 2998 Data or Text 21,01,AE
10651 299B EINT
10652 299C OR R40,ROC
10655 299F Data or Text 20,15,5A
10658 29A2 DECD RAE
10660 29A4 STSP
10661 29A5 Data or Text 41,03,21
10664 29A8 SBB B,A
10665 29A9 MOVD %56E5,RS7
10669 29AD MOV RE0,A
10671 29AF MOV B,R2C
10673 29B1 TSTA/CLRC
10674 29B2 OR RO0,A
10676 29B4 INV B
10677 29B5 BTJZ %41,B,6B
10680 29B8 MOVP P60,A

```

28A5

A,B

— called many times!

28E1

A,B

293B

29A4



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10682 29BA Data or Text 02,0B,00
10685 29BD MOV RC4,A
10687 29BF PUSH A
10688 29C0 OR X54,B
10689 29C2 DJNZ A,E3
10692 29C4 NOP
10693 29C5 ADD %B4,A
10695 29C7 DINT
10696 29C8 POP A
10697 29C9 XOR XD4,A
10699 29CB POP ST
10700 29CC Data or Text 70,15,11
10703 29CF SBB %6E,B
10705 29D1 DJNZ A,EB
10707 29D3 CALL #BAE5(B)
10710 29D6 CALL #BAE5(B)
10713 29D9 CALL #BAE5(B)
10716 29DC CALL #BAE5(B)
10719 29DF CALL #0941(B)
10722 29E2 Data or Text 03,21,6B
10725 29E3 CALL #6045(B)
10728 29E8 POP ST
10729 29E9 OR R80,A
10731 29EB MOVP P58,A
10733 29ED ORP A,P50
10735 29EF PUSH A
10736 29F0 XORP A,P5E
10738 29F2 CMP B,A
10739 29F3 XOR RD4,A
10741 29F5 DJNZ A,E4
10743 29F7 ORP B,P43
10745 29F9 Data or Text 61,02,5B
10748 29FC Data or Text 40,EE,BA
10751 29FF JMP 02
10753 2A01 STBP
10754 2A02 XOR RDO,A
10756 2A04 SUB XEO,B
10758 2A06 Data or Text 40,2E,04
10761 2A09 Data or Text 02,12,DB
10764 2A0C CALL #BAE5(B)
10767 2A0F CALL #BAE5(B)
10770 2A12 CALL #BAE5(B)
10773 2A15 CALL #BAE5(B)
10776 2A18 CALL #BAE5(B)
10779 2A1B CALL #02E0(B)
10782 2A1E SBB R21,R02
10785 2A21 MOVD %406B,RB6
10789 2A25 PUSH A
10790 2A26 Data or Text 04,92,10
10793 2A29 EINT
10794 2A2A XOR RBA,A
10796 2A2C JP/JGT 50
10798 2A2E POP A
10799 2A2F Data or Text 61,C4,B7
10802 2A32 Data or Text 50,94,10
10805 2A35 OR R2E,R57
10808 2A38 SBB RAE,A
10810 2A3A PUSH A
10811 2A3B ORP A,P03
10813 2A3D Data or Text 20,20,16
10816 2A40 MOV RE0,A
10818 2A42 Data or Text 10,B9,74
10821 2A45 OR R10,A
10823 2A47 NOP
10824 2A48 TRAP-17
10825 2A49 Data or Text 30,45,55
10828 2A4C NOP
10829 2A4D Data or Text 61,2E,20
10832 2A50 SBB %92,B
10834 2A52 Data or Text 51,13,12
10837 2A55 ADD %B4,B
10839 2A57 DINT
10840 2A58 DJNZ A,EB
10842 2A5A CALL #B885(B)
10843 2A5D DAC B,A
10844 2A5E Data or Text 11,00,01
10849 2A61 MPY %40,A
10851 2A63 TRAP-18
10852 2A64 DJNZ A,EB
10854 2A66 CALL #B975(B)
10857 2A69 OR RBA,RC1
10860 2A6C Data or Text 10,38,45
10863 2A6F MPY %BA,A
10865 2A71 JZ/JEQ 05
10867 2A73 POP A
10868 2A74 Data or Text 04,6E,48
10871 2A77 EINT
10872 2A78 XOR %65,B
10874 2A7A XOR R03,A
10876 2A7C PUSH A
10877 2A7D XORP A,P5E
10879 2A7F Data or Text 0C,45,48
10882 2A82 Data or Text 50,40,ED
10885 2A85 PUSH A
10886 2A86 OR R16,R11
10887 2A89 SBB RB5,R51
10892 2A8C AND R2E,A
10894 2A8E DJNZ A,1B
10896 2A90 BTJOP B,P46,EA
10899 2A93 DAC %B8,A
10901 2A95 MOV R06,B
10903 2A97 Data or Text 21,65,6E
10906 2A9A XOR R12,A
10908 2A9C DECD B
10909 2A9D XOR R91,R03
10912 2AA0 PUSH A
10913 2AA1 BTJO REE,A,BA
10916 2AA4 TSTB
10917 2AA5 Data or Text 10,38,45
10920 2AA8 MPY %B8,A
10922 2AAA OR %54,B
10924 2AAC DJNZ A,E0
10926 2AAE DAC %40,A
10928 2AB0 BTJO R6E,RBA,EB
10932 2AB4 CALL #BAE4(B)
10935 2AB7 MOVP P55,A
10937 2AB9 BTJO X31,B,50
10940 2ABC SBB R6E,B
10942 2ABE DJNZ A,EB
10944 2AC0 CALL #BAE5(B)
10947 2AC3 CLR R12
10949 2AC5 TRAP-20
10950 2AC6 BR #0804(B)
10953 2AC7 Data or Text 02,10,BB
10956 2ACC DAC %59,A
10958 2ACE SBB RAE,A
10960 2ADD Data or Text 0C,42,C4
10963 2AD3 ADD %45,B
10965 2AD5 Data or Text 99,31,14
10968 2AD8 DINT
10969 2AD9 PUSH A

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2A0D

2A67

2A2F  
12B39



FROM 2860 TO 2FFF ARE NOTHING BUT FF (BLANK SPOTS IN EPROM). These TRAPS ARE THE MEANS OF COMMUNICATIONS WITH THE OTHER CHIPS

```

12288 3000      MOV B,A
12289 3001      SBB %64,A
12291 3003      COPYRIGHT 1984/1985
12311 3017      M/A-COM LINKABIT CORP
12332 302C      MOV XFF,PO3 ; A VALUE STORED IN 'A' IS ALWAYS PASSED TO TRAP SIX (AND SOMETIMES STORED IN 2000)
12335 302F      BTJZP %10,P04,06;TO 3039 (TRAP 6 COMMUNICATES WITH U7)
12339 3033      DJNZ R03,F9 ; TO 302F (LOOP)
12342 3036      BR %F13B ; JUMP TO TRAP-14/2
12345 3039      STA $2000 ;
12346 303C      DRP %01,PO6
12351 303F      MOV XFF,PO3
12354 3042      BTJDP %10,P04,03;TO 304B (EXIT LOOP)
12358 3046      DJNZ R03,F9 ; TO 3042 (LOOP)
12361 3047      JMP EB ; TO 3036
12363 3048      AND %XFF,PO6
12366 304E      RETB ; <-----<<<
12367 304F      MOV XFF,PO3
12370 3052      BTJZP %10,P04,05;TO 305B
12374 3056      DJNZ R03,F9 ; TO 3052 (LOOP)
12377 3059      JMP DB ; JUMP TO 3036 (JUMP TO TRAP 14/2) 4000
12379 305B      ORP %01,PO6
12382 305E      MOV XFF,PO3
12385 3061      BTJDP %10,P04,05;TO 306A
12387 3065      DJNZ R03,F9 ; TO 305E (LOOP)
12392 3068      JMC CC ; JUMP TO 3036 (JUMP TO TRAP 14/2)
12394 306A      LDA $4000 ; THIS IS THE MASK VALUE FOR THE SERIAL (AUTH) NUMBER (STA 01 IN 4000 GIVES 0101 0101 XXXX)
12397 306D      AND %XFF,PO6
12400 3070      RETB ; <-----<<<
12401 3071      TRAP-7 LDA #R35
12403 3073      CALL %F02C ; SAME AS GOSUB TRAP-6 BUT MAY PASS
12406 3076      INC R35 ; VALUES USING POP AND PUSH
12408 3078      ADC X00,R34
12411 307B      DJNZ R10,F3 ; TO 3071 (LOOP)
12414 307E      RETB ; <-----<<<
12415 307F      AND %XFF,PO4
12418 3082      XCMB A
12419 3083      STA $2000
12422 3086      XCMB A
12423 3087      CALL %F0BE ; SAME AS GOSUB TRAP-13 BUT MAY PASS
12426 308A      DRP %00,PO4 ; VALUES USING POP AND PUSH
12427 308D      RETB ; <-----<<<
12430 308E      TRAP-13 DRP %02,PO6
12433 3091      STA $2000
12436 3094      AND %XFD,PO6
12439 3097      RETB ; <-----<<<
12440 3098      SUB3098 AND %0F,A
12442 309A      ADD X20,A
12444 309C      CMP %2A,A
12446 309E      JNC/JL 02
12448 30A0      SUB %2A,A
12450 30A2      RETB ; <-----<<<
12451 30A3      TRAP-15 MOV A,B
12452 30A4      SWAP A
12453 30A5      CALL %F098 ; GOSUB SUB3098 (LOOP BACK TO IT)
12456 30A8      TRAP-13 MOV B,A
12457 30A9      CALL %F098 ; GOSUB SUB3098 (LOOP BACK TO IT)
12458 30AA      TRAP-13 MOV B,A
12461 30AD      CALL %F098 ; GOSUB SUB3098 (LOOP BACK TO IT)
12462 30AE      TRAP-13 RETB ; <-----<<<
12463 30AF      TRAP-16 PUSH A
12464 30B0      SWAP A
12465 30B1      CALL %F098 ; GOSUB SUB3098 (LOOP BACK TO IT)
12466 30B4      TRAP-12 POP A
12469 30B5      POP A
12470 30B6      JMP F2 ; JUMP TO 30AA (TO TRAP 15)
12472 30B8      SUB308B CLR R10
12474 30BA      SUB308A PUSH A
12475 30B9      SWAP A
12476 30BC      CALL %FOCO ; GOSUB SUB30CD
12477 30BF      POP A
12480 30C0      SUB30CD AND %0F,A
12482 30C2      JNZ/JNE 09 ; TO 30CD -----WIERD-----
12484 30C4      MOV R10,R10
12487 30C7      JNZ/JNE 07 ; TO 30CD
12489 30C9      MOV %2E,A
12491 30CB      JMP 05
12493 30CD      MOV %FF,P10
12496 30D0      ADD X20,A
12498 30D2      TRAP-12
12499 30D3      INC B
12500 30D4      RETB ; <-----<<<
12501 30D5      CLR R10
12503 30D7      PUSH A
12504 30D8      SWAP A
12505 30D9      CALL %FOCO ; GOSUB SUB30CD (LOOP BACK TO IT)
12508 30DC      POP A
12509 30DD      AND %0F,A
12511 30DF      ADD X20,A
12513 30E1      TRAP-13
12514 30E2      RETB ; <-----<<<
12515 30E3      TRAP-0 DINT ; WARM BOOT STARTS HERE AND
12516 30E4      MOV X02,B ; HAPPENS AFTER EVERY CHANNEL
12518 30E6      MOV B,A ; CHANGE.
12519 30E7      STA $0000(B)
12522 30EA      INC B
12523 30EB      JPZ/JBE F9 ; TO 30E6 (LOOP)
12525 30ED      DEC B
12526 30EE      LDA $0000(B)
12529 30F1      CMP R00,B
12531 30F3      JNZ/JNE 3E ; TO 3133 (IDLE)
12533 30F5      INV A
12534 30F6      STA $0000(B)
12537 30F7      CMP X02,B
12539 30FB      JNZ/JNE FO ; TO 30ED (LOOP)
12541 30FD      DEC B
12542 30FE      MOV B,A
12543 30FF      INV A
12546 3102      CMPA $0000(B)
12548 3104      JNZ/JNE 2F ; TO 3133 (IDLE)
12549 3105      MOV B,A
12552 3108      STA $0000(B)
12553 3109      INC B
12555 310B      JPZ/JBE F2 ; TO 30FD (LOOP)
12558 310E      MOVP X20,P00
12560 310F      MOVD X0000,R37 ; ++++++ ++++++ ++++++ ++++++ ++++++
12562 3112      MOVD X0002,R35 ; ++++++ ++++++ ++++++ ++++++ ++++++
12566 3116      LDA #R35
12568 3118      ADD R00,R37
12571 311B      ADC X00,R36
12574 311E      INC R35
12576 3120      ADC X00,R34
12579 3123      JNZ/JNE F1 ; TO 3116 (LOOP)
12581 3125      MOV R37,A
12583 3127      CMPA %C001
12586 312A      JNZ/JNE 07 ; TO 3133 (IDLE)
12588 312C      MOV R36,A
12590 312E      CMPA $C000
12593 3131      JZ/JEQ 01 ; TO 3134 (CONTINUE)
12595 3133      IDLE ; CHANGE TO 00 TO DEFEAT CHECKSUM
12596 3134      CLR A
12597 3135      STA $67E5
12600 3138      MOV X05,P13 ; ALSO SAME ADDRESS AS TRAP-2
12603 313B      DINT
12604 313C      MOVP X00,P11

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\* There has to be a routine in another chip that takes values plugged into 2000 and splits them out at 4000

1e: MOV 01,A



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12607 313F      MOVP %40,P11
12610 3142      MOVP %4E,P11
12613 3143      MOVP %15,P11
12616 3146      MOVP %40,P15
12619 3148      MOVP %17,P14
12622 314E      MOV %4D,B
12624 3150      LDSP
12625 3151      MOVL %BF,P05
12628 3154      MOVL %10,P1C
12631 3157      MOVL %04,P04
12634 315A      MOVL %0C,P06
12637 315D      MOV %11,P06
12640 3160      MOV %0F,A
12642 3162      CALL @C392 ; SAME AS GOSUB TRAP-17
12645 3165      MOVD %037F,R37 ;+++++  
ANDP %FE,P04
12649 3167      ORP X01,P04
12652 316C      DECD R37
12657 3171      JC/J8 F6 ;TO 3169 (LOOP)
12659 3173      MOVD %4DAF,R37 ;+++++  
DECD R37
12663 3177      JC/J8 FC ;TO 3177 (LOOP)
12665 3179      MOV %0F,A
12667 317B      TRAP-6
12670 317E      TRAP-11
12671 317F      STA @622B
12674 3182      MOV %0D,A
12676 3184      TRAP-6
12677 3185      TRAP-11
12678 3186      OR %20,A
12680 3188      STA @6239
12683 318B      TRAP-11
12684 318C      STA @6238
12687 318F      MOVL A,P1A
12689 3191      TRAP-11
12690 3192      STA @6237
12693 3195      TRAP-11
12694 3196      STA @6236
12697 3199      TRAP-11
12698 319A      STA @6235
12701 319D      CLR A
12702 319E      STA @622B
12705 31A1      STA @6223
12708 31A4      STA @62BD
12711 31A7      STA @628C
12714 31AA      STA @67E6
12717 31AD      MOV %FF,A
12719 31AF      STA @6220
12722 31B2      STA @6221
12725 31B5      MOV A,R17
12727 31B7      MOV A,R14
12729 31B9      MOVD %F7DA,R3B ;+++++  
MOVD %F83B,R39 ;+++++
12733 31BD      CLR R04
12737 31C1      CLR R05
12741 31C5      MOVL %6000,R31 ;+++++  
CALL @F1E1 ;GOSUB SUB31E1
12745 31C9      CLR R20
12748 31CC      MOVL %0B,P21
12753 31D1      MOVL %FFFF,R44 ;+++++  
CLR R18
12757 31D5      MOV %XBB,P00
12759 31D7      MOVL %02,P10
12762 31DA      EINT
12766 31DE      BR #1FF ;GOTO 31FF
12769 31E1      CLR R08
12771 31E3      MOV R08,B
12773 31E5      LDA @6000(B)
12776 31E8      INC A
12777 31E9      JZ/JEQ 03 ;TO 31EE
12779 31EB      CALL @F22F ;GOSUB SUB322F
12782 31EE      CLR A
12784 31FO      STA @6000(B)
12785 31F1      ADD %33,R08
12788 31F4      CMP %CC,R08
12791 31F7      JNZ/JNE E7 ;TO 31E3 (LOOP)
12794 31FA      CLR R08
12796 31FC      RETB
12798 31FE      STSF
12799 31FF      ;<-----<<
12800 3200      XCMB A
12801 3201      CMPA @67E6
12804 3204      JNC/JL 03 ;DIRECT COMPARISON
12806 3206      STA @67E6
12807 3207      MOV R08,B
12811 3208      DINT
12812 320C      INC R44
12814 320E      ADC %00,R43
12817 3211      EINT
12819 3212      LDA @6000(B)
12821 3215      JZ/JEQ F2 ;TO 3209 (LOOP)
12823 3217      CALL @F22F ;GOSUB SUB322F
12826 321A      MOV R08,B
12828 321C      CLR A
12829 321D      STA @6000(B)
12832 3220      STA @6223
12835 3223      ADD %33,R08
12838 3226      CMP %CC,R08
12841 3229      JNZ/JNE 02 ;TO 322D
12843 322B      CLR R08
12845 322D      JMP DO ;JUMP TO 31FF (LOOP)
12847 322F      INC A
12848 3230      JNZ/JNE 0D ;TO 323F
12850 3232      LDA @6001(B)
12853 3235      CMP %20,A
12855 3237      JC/J8 06 ;TO 323F
12857 3239      AND %3F,A
12859 323B      CMP %20,A
12861 323D      JNC/JL 01 ;TO 3240 (BYPASS RETB EXPAND LOOP)
12863 323F      RETB
12864 3240      MOV A,R09
12866 3242      MOV A,B
12867 3243      LDA @DDE6(B) ;LOOKUP TABLE18
12867 3243      PUSH A ;THESE ARE VECTORS TO FUNCTIONS FOR THE DIFFERENT MODES
12870 3246      LDA @DDE6(B) ;LOOKUP TABLE19
12871 3247      PUSH A
12874 324A      RETB
12875 324B      ;<-----<<
12876 324C      MOV R18,A ;REFERENCED IN TABLES 18/19*****  
JNZ/JNE 17 ;TO 3267 (RETB)
12880 3250      LDA @6223
12883 3253      BTJZ %R10,A,OE ;TO 3264 (BYPASS LOOKUP)
12886 3256      LDA @F402(B) ;LOOKUP TABLE21
12889 3259      MOV A,B
12890 325A      LDA @6119(B)
12893 325D      MOV R08,B
12895 325F      CMPA @6002(B)
12898 3262      JNZ/JNE 03 ;TO 3267
12900 3264      CALL @F3C5 ;GOSUB SUB33C5 (CHECK IF VC2 CHANNEL AND IF AUTH.)
12903 3267      RETB
12904 3268      MOV R08,B ;REFERRED IN TABLES 18/19*****  
LDA @6238
12906 326A

```

Patch Here for New

Auth. #

12:

MOV OC,A

STA @6228

MOV FF,A

STA @6239

MOV Z2,A

STA @6238

MOV ...

This will give a new  
(and workable) Auth. #  
in the program and a  
setup 1) P.S. you must  
get rid of Temp 11 in  
the patch!



```

12909 324D      CMPA #6002(B)
12912 3270      JNZ/JNE F5      ;TO 3267 (RETS)
12914 3272      LDA #6237
12917 3275      CMPA #6003(B)
12920 3278      JNZ/JNE ED      ;TO 3267 (RETS)
12922 327A      LDA #6236
12925 327D      CMPA #6004(B)
12928 3280      JNZ/JNE ED      ;TO 3267 (RETS)
12930 3282      LDA #6235
12933 3285      CMPA #6005(B)
12936 3288      JNZ/JNE DD      ;TO 3267 (RETS)
12938 328A      LDA #6015(B)
12941 328D      MOV A,ROA
12943 328F      CMPA #6247      ;DIRECT COMPARISON
12946 3292      JZ/JED 06      ;TO 329A
12948 3294      LDA #6233
12951 3297      BTJO #10,A,65  ;TO 32FF (RETS)
12954 329A      MOV ROA,A
12956 329C      STA #6247
12959 329F      LDA #601B(B)
12962 32A2      STA #6223
12965 32A5      BTJO #20,A,05  ;TO 32AD
12968 32A8      MOV XFF,A
12970 32AA      STA #6260
12973 32AB      LDA #601A(B)
12976 32B0      STA #6222
12979 32B3      LDA #621B
12982 32B6      DAC X01,A
12984 32B8      STA #621B
12987 32B8      JNZ/JNE 0B      ;TO 32C9
12989 32BD      LDA #621A
12992 32C0      DAC X01,A
12994 32C2      STA #621A
12997 32C5      CMP R09,R17
13000 32C8      JNZ/JNE 03      ;TO 32CD
13002 32CA      MOV XFF,P17
13005 32CD      CALL #F3C5      ;GOSUB SUB33C5 (CHECK IF VC2 CHAN AND IF AUTH.)
13008 32D0      MOVD #61E4,R48  ;+++++-----+
13012 32D4      CALL #C116      ;GOSUB SUB116
13015 32D7      RETS      ;-----<<
13016 32D8      MOV R08,B      ;REFERENCED IN TABLES 18/19*****8888888888
13018 32DA      LDA #6002(B)
13021 32D9      CMPA #6247      ;DIRECT COMPARISON
13024 32E0      JNZ/JNE 1D      ;TO 32FF (RETS)
13026 32E2      LDA #6003(B)
13029 32E5      CMPA #6246      ;DIRECT COMPARISON
13032 32E8      JNZ/JNE 15      ;TO 32FF (RETS)
13034 32EA      LDA #601B(B)
13037 32ED      MOV R1B,B
13039 32EF      JNZ/JNE 0E      ;TO 32FF (RETS)
13041 32F1      MOV A,ROA
13043 32F3      LDA #6233
13046 32F6      JZ/JED 04      ;TO 32FC (GOSUB TO TURN ON/OFF)
13048 32F8      CMP ROA,A
13050 32FA      JNZ/JNE 03      ;TO 32FF (RETS)
13052 32FC      CALL #F3C5      ;GOSUB SUB33C5 (CHECK IF VC2 CHAN. AND IF AUTH.)
13055 32FF      RETS      ;-----<<
13058 3300      MOV R08,B      ;REFERENCED IN TABLES 18/19*****8888888888
13061 3305      LDA #6025(B)
13063 3307      JMP E6      ;TO JUMP TO 32ED (LOOP)
13066 330A      LDA #6225      ;REFERENCED IN TABLES 18/19*****8888888888
13067 330B      INC A
13069 330D      JNZ/JNE F2      ;TO 32FF (RETS)
13070 330E      DINT
13072 3310      MOV X0A,A
13073 3311      TRAP-6
13075 3313      MOV XFF,A
13076 3314      TRAP-6
13077 3315      DEC A
13079 3317      CMP ZEC,A
13081 3317      JNZ/JNE FA      ;TO 3313 (LOOP)
13083 331B      MOV ZDC,A
13084 331C      TRAP-6
13086 331E      MOV Z02,B      ;B IS STEPPED UP IN 2'S USING R08*****88888888888888
13088 3320      ADD R08,B
13092 3324      MOVD #6000(B),R35;+++++-----+
13095 3327      MOV Z04,P10
13096 3328      TRAP-7
13098 332A      MOV Z90,A
13099 332B      TRAP-6
13101 332D      MOV Z57,A
13102 332E      TRAP-6
13104 3330      MOV Z37,A
13105 3331      TRAP-6
13106 3332      DINT
13109 3335      CALL #F431      ;GOSUB SUB3431
13112 3338      CALL #D0A8      ;GOSUB SUB10A8
13114 333A      MOV ZFF,A
13117 333D      STA #628B
13120 3340      STA #626B
13123 3343      STA #6260
13125 3345      MOV X01,A
13128 3348      STA #6253
13131 334B      BR #F0E3      ;SAME AS LOOP TO TRAP-0
13134 334E      LDA #6225      ;REFERENCED IN TABLES 18/19*****8888888888
13135 334F      INC A
13137 3351      JNZ/JNE 39      ;TO 338A (RETS)
13139 3353      MOV R08,B
13142 3356      LDA #623B
13145 3359      CMPA #6002(B)
13147 335B      JNZ/JNE 2F      ;TO 338A (RETS)
13150 335E      LDA #6237
13153 3361      CMPA #6003(B)
13155 3363      JNZ/JNE 27      ;TO 338A (RETS)
13158 3366      LDA #6236
13161 3369      CMPA #6004(B)
13163 3368      JNZ/JNE 1F      ;TO 338A (RETS)
13166 336E      LDA #6235
13169 3371      CMPA #6005(B)
13171 3373      JNZ/JNE 17      ;TO 338A (RETS)
13174 3376      MOVP Z89,P00
13176 3378      MOV Z0B,A
13177 3379      TRAP-6
13179 3378      ADD Z06,B
13183 337F      MOVD #6000(B),R35;+++++-----+
13186 3382      MOV Z0B,P10
13187 3383      TRAP-7
13191 3387      MOVP Z89,P00
13194 338A      RETS      ;-----<<
13195 338B      LDA #601F(B)
13197 338D      CMPA #6247      ;DIRECT COMPARISON
13200 3390      JNZ/JNE F5      ;TO 338A (RETS)
13203 3393      BR #F2FC      ;GOTO 32FC
13205 3395      MOV R08,B
13208 3396      LDA #6238
13210 339A      CMPA #6002(B)
13213 339D      JNZ/JNE EB      ;TO 338A (RETS)
13216 33A0      LDA #6237
13218 33A2      CMPA #6003(B)
13221 33A5

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13224 33A8 JNZ/JNE E0 ;TO 338A (RETS)
13226 33A9 LDA #236
13229 33AD CMPA #6004(B)
13232 33B0 JNZ/JNE DB ;TO 338A (RETB)
13234 33B2 LDA #235
13237 33B5 CMPA #6005(B)
13240 33B8 JNZ/JNE DO ;TO 338A (RETB)
13242 33B9 LDA #600C(B)
13245 33BD CMPA #6247 ;DIRECT COMPARISON
13248 33C0 JNZ/JNE CB ;TO 338A (RETB)
13250 33C2 BR #F2FC
13253 33C5 MOV R09,B
13255 33C7 LDA #F410(B) ;LOOKUP TABLE22 (CHECK FOR SER NO ?)
13258 33CA JNZ/JNE 01 ;TO 33CD (EXPAND THE LOOP IF VCO CHAN)
13260 33CC RETS
13261 33CD MOV A,R09
13263 33CF MOVD X60FF,R4A ;+++++  

13267 33D3 DEC A
13268 33D4 ADD R00,R4A ;R00 = REG A
13271 33D7 ADC %00,R49
13274 33DA LDA #F402(B) ;LOOKUP TABLE21 (CHANGED TO 0'S WAS DEAUTHORIZED)
13277 33DD ADD R00,R4A ;R00 = REG A
13280 33E0 ADC %00,R49
13283 33E3 LDA #F41E(B) ;LOOKUP TABLE23
13286 33E6 MOV R08,B
13288 33E8 ADD R00,B ;R00 = REG A
13290 33EA MOVP %08,P10
13293 33ED MOVP %09,P00
13296 33F0 LDA #6000(B)
13299 33F3 STA #R4A
13301 33F5 DEC B
13302 33F6 DECD R4A
13304 33F8 DJNZ R09,F5 ;TO 33F0 (LOOP)
13307 33FB MOVP %09,P00 ;TURN OFF OR ON?
13310 33FE MOVP %09,P10 ;TURN OFF OR ON?
13313 3401 RETS
13314 3402 TABLE21 00,63,07,6A,1D,80,3A,9D,00,00,E5,F9,00,C6 (DEAUTHORIZED ME WHEN THIS WAS REPLACED WITH 0's)
13330 3412 TABLE22 07,07,16,16,1D,1D,25,25,00,00,14,07,00,1F
13346 3422 TABLE23 07,07,1A,1A,1D,1D,25,25,00,00,14,0B,00,1F
13357 342C TRAP-10 LDA #F402(B) ;LOOKUP TABLE21
13359 342F MOV A,B
13360 3430 RETS
13361 3431 SUB3431 MOVD X07FF,R4A ;+++++  

13365 3435 MOVD X67FF,R33 ;+++++  

13369 3437 CLR A
13370 343A 343A STA #R33
13372 343C DEC D
13374 343E DEC D R4A
13376 3440 JC/JB F8 ;TO 343A (LOOP)
13378 3442 RETS
13379 3443 TRAP-1 PUSH A
13380 3444 PUSH B
13381 3445 MOV R04,A
13383 3447 JNZ/JNE 49 ;TO 349Z
13385 3449 BTJOP %01,P1A,73;TO 34C0
13387 344D MOVP F1B,B
13391 344F CMP %09,B
13393 3451 JNZ/JNE 0A ;TO 345D
13395 3453 MOVD %60CC,R33 ;+++++  

13397 3457 LDA #R33
13401 3459 JNZ/JNE 72 ;TO 34CD
13403 345B JMP 2A ;JUMP TO 3487
13405 345D MOVD R31,R33
13408 3460 LDA #R31
13410 3462 JZ/JEQ 23 ;TO 3487
13412 3464 LDA #621D
13415 3467 DAC %01,A
13417 3469 STA #621D
13420 347C JNZ/JNE 0B ;TO 3476
13422 348E LDA #621C
13425 3471 DAC %01,A
13427 3473 STA #621C
13430 3476 BTJZ X40,B,54 ;TO 34CD
13433 3479 SUB %33,R31
13436 347C JC/JB 03 ;TO 3481
13438 347E MOV %99,P31
13441 3481 MOVD R31,R33
13444 3484 CLR A
13445 3485 STA #R33
13447 3487 MOV B,A
13448 3488 INC R33
13450 348A STA #R33
13452 348C INC R04
13454 348E BTJZP %04,P1A,32;TO 34C0
13458 3492 BTJOP %01,P1A,09;TO 349F
13462 3496 CMP %32,R04
13465 3499 JC/JB 32 ;TO 34CD
13467 349B MOVP P1B,A
13469 349D JMP E9 ;TO 3588
13471 349F BTJOP %02,P1A,1D;TO 34C0
13475 34A3 MOV XFF,A
13477 34A5 MOV A,R05
13479 34A7 CMP %CC,R33
13482 34A9 JNC/JL 05 ;TO 34B1
13484 34AC STA #60CC
13487 34AF JMP OF ;JUMP TO 34C0
13489 34B1 STA #R31
13491 34B3 ADD %33,R31
13494 34B6 CMP %CC,R31
13497 34B9 JNZ/JNE 05 ;TO 34C0
13499 34B9 MOV %00,P31
13502 34BE JMP 00 ;JUMP 00 ??????????????????????????????
13504 34C0 34C0 MOVP P1B,A
13506 34C2 CLR R04
13508 34C4 MOV P00,B
13510 34C6 AND XD7,B
13512 34C8 MOV B,P00
13514 34CA POP B
13515 34CB POP A
13516 34CC RETI
13517 34CD MOV R06,B
13519 34CF AND X77,B
13521 34D1 MOVP B,P1C
13523 34D3 MOV R06,B
13525 34D5 MOVP B,P1C
13527 34D7 JMP E9 ;JUMP TO 34C2 (LOOP)
13529 34D9 MOVP %00,P10
13532 34DC EINT
13533 34DD PUSH A
13534 34DE PUSH B
13535 34DF LDA #60CC
13536 34E2 MOVP A,R03
13540 34E4 MOV R1B,A
13542 34E6 JZ/JEQ OC ;TO 34F4
13544 34EB DINT
13545 34E9 LDA #6226
13546 34EC DAC %01,A
13550 34EE STA #6226
13553 34F1 BR #F138 ;GOTO TRAP 14/2
13556 34F4 MOV XFF,P1B
13559 34F7 MOV R13,B

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13882 363A AND XDC,B
13884 363C OR R00,B
13886 363E MOV B,R06
13888 3640 LDA @622E ;MEM LOC OF AUTH CODE INFO*****8888888888888888
13891 3643 AND X7B,R07
13894 3646 BTJD X40,A,03 ;TO 364C
13897 3649 OR X80,R07
13900 364C BTJD X04,A,03 ;TO 3652
13903 364F OR X04,R07
13905 3652 LDA @622E ;MEM LOC OF AUTH CODE INFO*****8888888888888888
13909 3655 BTJD X1B,A,02 ;TO 365A
13912 3658 JMP 3A ;TO 3694
13914 365A CLR R1B
13916 365C CLR A
13917 365D STA @6252
13920 3660 MOV R15,A
13922 3662 MOV X01,POE
13925 3665 RL A
13926 3666 RLC R0E
13928 3668 MOV R06,B
13930 366A AND X73,B
13932 366C LDA @622F
13935 366F BTJZ XRA0,A,0A ;TO 367C
13938 3672 OR X04,B
13940 3674 LDA @627B
13943 3677 BTJD XR01,A,02 ;TO 367C
13946 367A XOR Z0C,B
13948 367C MOV B,R06
13950 367E MOV X84,P1D
13953 3681 LDA @622F
13956 3684 AND X07,A
13958 3686 STA @6254
13961 3689 LDA @6253
13964 368C CMPA @6254 ;DIRECT COMPARISON
13967 368F JC/JB 03 ;TO 3694
13969 3691 MOV X83,P1D
13972 3694 LDA @622D
13975 3697 CLR B
13976 3698 BTJD XR20,A,02 ;TO 369D
13977 369B MOV X63,B
13981 369D CLR R1E
13983 369F LDA @6131(B)
13986 36A2 MOV A,R10
13988 36A4 LDA @622D
13991 36A7 XOR R10,A
13993 36A9 BTJD X60,A,23 ;TO 36CF
13996 36AC LDA @6233
13999 36AF CMPA @6136(B)
14002 36B2 JNZ/JNE 1B ;TO 36CF
14004 36B4 CMPA @615D(B)
14007 36B7 JNZ/JNE 16 ;TO 36CF
14009 36B9 LDA @613A(B)
14012 36BC XOR R10,A
14014 36BE BTJD XE0,A,0E ;TO 36CF
14017 36C1 MOV XFF,P1E
14020 36C4 LDA @622E ;MEM LOC OF AUTH CODE INFO*****8888888888888888
14023 36C7 BTJD X1B,A,05 ;TO 36CF
14026 36CA LDA @6131(B)
14029 36CD JMP 03 ;TO 36D2
14031 36CF LDA @622D
14034 36D2 CLR B
14035 36D3 TSTA/CLRC
14036 36D4 JPZ/JBE 02 ;TO 36D8
14038 36D6 MOV X63,B
14040 36D8 LDA @6119(B)
14043 36D9 STA @601B
14046 36DE LDA @611A(B)
14049 36E1 STA @6246
14052 36E4 LDA @6223
14055 36E7 AND XFC,R07
14058 36EA TSTA/CLRC
14059 36EB JNZ/JLT 03 ;TO 36F0
14061 36ED OR X01,R07
14064 36F0 RL A
14065 36F1 JPZ/JGE 03 ;TO 36F6
14067 36F3 OR X02,R07
14070 36F6 CMP X01,R11
14073 36F9 JZ/JEQ 4C ;TO 3747
14075 36FB MOV X04,P11
14078 36FE BR SF7DE ;GOTO SUB37DE
14081 3701 SUB3701 DEC R11
14083 3703 JPZ/JEQ 02 ;TO 3707
14085 3705 BR *R39 ;CALLS AUTH PROCEDURE (RESET TO FB3B IN SEVERAL LOCATIONS)
14087 3707 LDA @60CD
14090 370A MOV A,B
14091 370B CLR A
14092 370C STA @60CD
14095 370F CMP X90,B
14097 3711 JNZ/JNE 02 ;TO 3715
14099 3713 CLR R02
14101 3715 MOV P1C,B
14103 3717 TSTA/CLRC
14104 3718 RRQ B
14105 3719 DEC B
14106 371A RR B
14107 371B RR B
14108 371C RR B
14109 371D INC B
14110 371E MOV R06,A
14112 3720 RR A
14113 3721 RLC B
14114 3722 AND X07,B
14116 3724 LDA @DD56(B) ;LOOKUP TABLE14
14117 3727 CMP R00,R02
14122 372A JC/JB 1B ;TO 3747
14124 372C INC R02
14125 372E LDA @6230
14129 3731 INC A
14130 3732 STA @6230
14133 3735 JNZ/JNE 10 ;TO 3747
14135 3737 LDA @6231
14138 373A INC A
14139 373B STA @6231
14142 373E JNZ/JNE 07 ;TO 3747
14144 3740 LDA @6232
14147 3743 INC A
14148 3744 STA @6232
14151 3747 MOV X04,P11
14154 374A LDA @6230
14157 374D AND X1F,A
14159 374F JNZ/JNE 03 ;TO 3754
14161 3751 CALL @CA1A ;6OSUB SUBA1A
14164 3754 MOV X0E,A
14166 3756 TRAP-B
14167 3757 MOV R07,A
14169 3759 TRAP-B
14170 375A LDA @622B
14173 375D JZ/JEQ 02 ;TO 3761
14175 375F BR *R37 ;ONE VALUE OF THIS IS 174 (C17)
14177 3761 LDA @6233
14180 3764 MOV R16,R34

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14183 3767
14185 3769
14188 376C
14190 376E
14193 3771
14195 3773
14198 3776
14201 3779
14204 377C
14207 377F
14209 3781
14212 3784
14215 3787
14217 3789
14220 378C
14222 378E
14224 3790
14226 3792
14228 3794
14230 3796
14232 3798
14234 379A
14235 379B
14237 379D
14239 379F
14241 37A1
14243 37A3
14245 37A5
14246 37A8
14251 37AB
14254 37AE
14259 37B3
14262 37B6
14264 37B8
14266 37BA
14268 37BC
14270 37BE
14271 37BF
14273 37C1
14276 37C4
14278 37C6
14279 37C7
14281 37C9
14283 37CB
14284 37CC
14288 37D0
14291 37D3
14292 37D4
14294 37D6
14296 37D8
14298 37DA
14302 37DE
14303 37DF
14304 37E0
14307 37E3
14309 37E5
14310 37E6
14311 37E7
14314 37EA
14317 37ED
14319 37EF
14321 37F1
14322 37F2
14325 37F5
14328 37F8
14331 37FB
14334 37FE
14337 3801
14340 3804
14343 3807
14346 380A
14349 380D
14351 380F
14353 3811
14355 3813
14357 3815
14360 3818
14363 381B
14366 381E
14369 3821
14370 3822
14372 3824
14375 3827
14379 3829
14381 382D
14382 382E
14385 3831
14388 3834
14389 3835
14392 3838
14394 383A
14395 383B
14398 383E
14400 3840
14402 3842
14404 3844
14406 3846
14408 3848
14409 3849
14411 384B
14415 384F
14416 3850
14417 3851
14418 3852
14420 3854
14422 3856
14424 3858
14426 385A
14429 385D
14431 385F
14433 3861
14435 3863
14438 3866
14440 3868
14442 386A
14444 386C
14446 386E
14448 3870
14450 3872
14453 3875
14455 3877
14458 387A
14461 387D
14463 387F
14466 3882
14469 3885
14472 3888
14474 388A
14477 388D
14480 3890

MOV A,R16
XOR R00,R34
JZ/JEQ 0B ;TO 3779
CMP R00,R34
JZ/JNE 06 ;TO 3779
CALL @F6222 ;GOSUB SUB3822
CALL @F7F1 ;GOSUB SUB37F1
MOV R15,R10
LDA @6222D
MOV A,R15
XOR R00,R10
AND ZEO,R10
MOV R14,B
LDA @6222E
AND Z1B,A
MOV A,R14
JNZ/JNE 17 ;TO 37A8
MOV R34,A
JNZ/JNE 0D ;TO 37A3
MOV R10,A
JNZ/JNE 05 ;TO 379F
TSTB
JNZ/JNE 02 ;TO 379F
;ONE VALUE OF THIS IS 174 (C174)

LOOP379F
MOV ZFF,A
MOV A,R17
MOV ZFF,A
STA @62279
BR @F999
LDA @62253
CMP A @62254
JN/JLT 2B ;DIRECT COMPARISON
LDA @622E ;MEM LOC OF AUTH CODE INFO$$$$$$$$$$$$$$$$$$$$$$
AND Z1B,A
CMP Z1B,A
JNZ/JNE 05 ;TO 37C1
MOV X10,A
TRAP-6
JMP 1D ;TO 37DE
BTJD X10,A,05 ;LOOKS LIKE THE TEST FOR 622E = 10 (MEANS FIXED!!!!!!!!!!!!)
MOV X08,A
TRAP-6
JMP 1B ;TO 37DE
MOV X06,A
TRAP-6
MOVW %6230,R35 ;+++++ooooooooooooo+++++ooooooooooooo+++++
MOV X03,P10
TRAP-7
JMP 0B ;TO 37DE
POP R3B
POP R3A
MOVW %FB3B,R37 ;+++++ooooooooooooo+++++ooooooooooooo+++++
POP B
POP A
MOV P10
CLR R18
RETI
CLR A
STA @6233
STA @622D
CLR R16
CLR R03
CLR A
STA @6136
STA @615D
STA @6199
STA @61C0
STA @615F
STA @61C2
STA @61E7
STA @6219
STA @6227
CLR R1D
CLR R22
CLR R1E
MOV X20,A
STA @6131
STA @613A
STA @6194
STA @619D
RETS ;<-----<<
MOV %0F,A
CALL @C592 ;SAME AS GOSUB TRAP-17
MOVW %CCD7,R3B ;+++++ooooooooooooo+++++ooooooooooooo+++++(MIGHT BE THE FA TURN ON FUNCTION)
CLR R19
CLR A
STA @6252
STA @6227
INV A
STA @6279
CLR R1B
RETS
3838 CMP X03,R13 ;CALLED AS ADDRESS IN R38,R39
JNC/JL 9E ;37DE (LOOP)
BR #R3B ;?????? (DON'T KNOW WHERE TO )
TRAP-8
POP R37
POP R36
JMP 96 ;JUMP TO 37DE (LOOP)
TRAP-9
JMP FD ;JUMP TO 384B (LOOP)
BTJZ X02,P11,4F;TO 389E
EINT
PUSH A
PUSH B
MOVP P16,B
CMP X7E,B
JNZ/JNE 07 ;TO 385F
MOV XFF,A
STA @6225
JMP 3D ;TO 389C
CMP X7D,B
JNZ/JNE 03 ;TO 3866
BR @F331 ;GOTO LOOP3331
CMP X20,B
JC/JB 32 ;TO 389C
CMP X0F,B
JZ/JEQ 09 ;TO 3877
CMP X0C,B
JZ/JEQ 05 ;TO 3877
LDA @67E5
JNZ/JNE 25 ;TO 389C
LDA @DD66(B) ;LOOKUP TABLE15 (A WILL = 0,1,2 OR 4)
BTJZ X02,A,02 ;TO 387F
CLR R19
AND ZDF,R1F
BTJD X01,A,05 ;TO 388A
CMP X03,R13
JNC/JL 12 ;TO 389C
LDA @DD66(B) ;LOOKUP TABLE15 (A WILL = 0,1,2 OR 4)
BTJD X04,A,0C ;TO 389C

looks like  
Reset Routine

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14481 3891      LDA #DD086(B) ;LOOKUP TABLE16!           |<--R38+R39 CONTAIN ADDRESS FOR ROUTINE TO RUN
14484 3894      MOV A,R38
14486 3896      LDA #DDA6(B) ;LOOKUP TABLE17!
14489 3897      MOV A,R37
14491 3898      EINT
14492 389C      POP B
14493 389D      POP A
14494 389E      RETI
14495 389F      MOV X00,A ;REFERENCED TABLES 16/17****KEYBOARD (0=et all)ROUTINES*****
14497 38A1      JMP 2F ;JUMP TO 38D2
14499 38A3      MOV X01,A ;REFERENCED TABLES 16/17*****
14501 38A5      JMP 2B ;JUMP TO 38D2
14503 38A7      MOV X02,A ;REFERENCED TABLES 16/17*****
14505 38A9      JMP 27 ;JUMP TO 38D2
14507 38AB      MOV X03,A ;REFERENCED TABLES 16/17*****
14509 38AD      JMP 23 ;JUMP TO 38D2
14511 38AF      MOV X04,A ;REFERENCED TABLES 16/17*****
14513 38B1      JMP 1F ;JUMP TO 38D2
14515 38B3      MOV X05,A ;REFERENCED TABLES 16/17*****
14517 38B5      JMP 1B ;JUMP TO 38D2
14519 38B7      MOV X06,A ;REFERENCED TABLES 16/17*****
14521 38B9      JMP 17 ;JUMP TO 38D2
14523 38BB      MOV X07,A ;REFERENCED TABLES 16/17*****
14525 38BD      JMP 13 ;JUMP TO 38D2
14527 38BF      MOV X08,A ;REFERENCED TABLES 16/17*****
14529 38C1      JMP 0F ;JUMP TO 38D2
14531 38C3      MOV X09,A ;REFERENCED TABLES 16/17*****
14533 38C5      JMP 0B ;JUMP TO 38D2
14535 38C7      MOV X0A,A ;REFERENCED TABLES 16/17*****
14537 38C9      JMP 02 ;JUMP TO 38CD
14539 38CB      MOV X0B,A ;REFERENCED TABLES 16/17*****
14541 38CD      CMP X01,R19 ;TO 38F3
14544 38D0      JNZ/JNE 21 ;TO 38F3
14546 38D2      MOV R19,B ;TO 38F3
14548 38D4      JZ/JEQ 1D ;TO 38F3
14550 38D6      CMP R1A,R19 ;TO 38F3
14552 38D9      JZ/JEQ 1B ;TO 38F3
14555 38D8      MOV R1A,B
14557 38DD      STA #6255(B)
14560 38E0      INC R1A
14562 38E2      MOV X38,B
14564 38E4      CALL #F950 ;GOSUB SUB3950
14567 38E7      LDA #627A
14570 38EA      INC A
14571 38EB      STA #627A
14574 38EE      CMP X01,R19 ;TO 391A
14577 38F1      JZ/JEQ 27 ;GOTO LOOP37DA REFERENCED TABLES 16/17
14579 38F3      BR #F7DA ;REFERENCED TABLES 16/17*****
14582 38F6      MOV R19,A ;TO 38F3 (LOOP)
14584 38FB      JZ/JEQ F9
14586 38FA      MOV X0C,A
14588 38FC      MOV R3F,B
14590 38FE      JZ/JEQ D2 ;TO 38D2 (LOOP)
14592 3900      MOV R1A,B
14594 3902      JZ/JEQ EF ;TO 38F3 (LOOP)
14596 3904      DEC B
14597 3905      MOV XFF,A
14599 3907      STA #6255(B)
14602 390A      MOV B,R1A
14604 390C      MOV X2E,B
14606 390E      LDA #627A
14608 3911      DEC A
14610 3912      STA #627A
14613 3915      CAL #F950 ;GOSUB SUB3950
14616 3918      JMP D9 ;JUMP TO 38F3 (LOOP)
14618 391A      MOV R19,B ;REFERENCED TABLES 16/17*****
14620 391C      JZ/JEQ D5 ;TO 38F3 (LOOP)
14622 391E      CLR R17
14624 3920      MOV R3F,B
14626 3922      JZ/JEQ CF ;TO 38F3 (LOOP)
14628 3924      MOVD R40,R3B
14631 3927      JMP CA ;JUMP TO 38F3 (LOOP)
14633 3929      CLR A ;REFERENCED TABLES 16/17
14634 392A      STA #6252
14637 392D      INV A
14638 392E      STA #67E5
14641 3931      BR $CCED ;GOTO SUBCED
14644 3934      CLR A ;REFERENCED TABLES 16/17*****
14645 3935      STA #67E5 ;R1D CONTAINS THE AUTH CODE*****$$$$$$$$$$$$$$$
14648 3938      MOV R1D,A
14650 393A      AND X7F,A
14652 393C      CMP X04,A
14654 393E      JZ/JEQ F1 ;TO 3931 (LOOP)
14655 3940      BR $CCD7 ;GOTO SUBC7D(ALSO AB A VECTOR IN TABLE 16/17 MAY BE THE TURN ON FUNCTION)
14659 3943      MOV X05,P13 ;REFERENCED TABLES 16/17*****
14662 3946      MOV X0F,A ;REFERENCED TABLES 16/17*****
14664 3948      CALL #C392 ;SAME AS GOSUB TRAP-17
14666 394B      TRAP-9 ;JUMP TO 394B (LOOP)
14668 394C      JMP FD ;JUMP TO 3946 (LOOP)
14670 394E      JMP F6
14672 3950      MOV R3F,A
14674 3952      JZ/JEQ DA ;TO 395E (RETS)
14676 3954      CMP X01,R19 ;TO 395E (RETS)
14679 3957      JZ/JEQ D5 ;TO 395E (RETS)
14681 3959      LDA #627A
14684 395C      XCHB A
14685 395D      TRAP-12
14686 395E      RETS
14687 395F      XCHB A ;<-----<<
14688 3960      STA #627A ;HOW MANY ITEMS TO SHOW ON SET-UP MENU
14691 3963      MOV B,R19
14693 3965      CLR R1A
14695 3967      CAL #F950 ;GOSUB 3990
14698 396A      POP R40
14700 396C      POP R3F
14702 396E      CLR A ;A=0
14703 396F      STA #625F
14704 3972      MOVD X1A$E,R42 ;+++++++
14710 3976      TRAP-9
14711 3977      MOV R1A,A ;DIRECT COMPARISON
14713 3979      CMPA #625F ;TO 396F (LOOP)
14716 397C      JNZ/JNE F1
14718 397E      DECD R42
14720 3980      JC/J5 F4 ;TO 3976 (LOOP)
14722 3982      CLR R19
14724 3984      BR $CE15 ;GOTO SUBE15
14727 3987      MOV X01,A
14728 3988      MOV A,R19
14731 398B      CLR R1A ;R1A=0
14733 398D      CLR R3F ;R3F=0
14735 398F      MOV A,B
14736 3990      MOV XFF,A
14738 3992      STA #6254(B)
14741 3995      DNJZ B,FB ;TO 3992 (LOOP)
14743 3997      RETS ;<-----<<
14744 3998      LOOP3998 TRAP-B ;A=0
14745 3999      CLR A
14746 399A      STA #6224
14749 399D      STA #622B
14752 39A0      CLR R1B ;R1B=0
14754 39A2      CLR R1D ;R1D CONTAINS THE AUTH CODE*****$$$$$$$$$$$$$$$

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14756 39A4      MOV R15,A
14758 39A6      MOV X01,POE
14761 39A9      RLC A
14762 39AA      RLC ROE
14764 39AC      MOV X02,B
14766 39AE      RL A
14767 39AF      RLC A
14768 39B0      RLC B
14769 39B1      MOV B,ROF
14770 39B3      CALL #FCOA ;S0SUB SUB3COA
14771 39B4      MOV ROF,B
14772 39B5      TRAP-10
14773 39B6      LDA #6113(B)
14774 39B7      AND X07,A
14775 39B8      STA #6254
14776 39B9      LDA #6119(B)
14777 39B9      CMPA #6233 ;DIRECT COMPARISON
14778 39C0      JNZ/JNE CF ;TO 3998 (LOOP)
14779 39C1      LDA #6114(B)
14780 39C2      MOV A,R37
14781 39C3      MOV R15,A
14782 39C4      XOR R37,A
14783 39C5      BTJD #60,A,C3 ;TO 3998 (LOOP)
14784 39C6      LDA #6100(B)
14785 39C7      MOA R15,R36
14786 39D0      LDA #6101(B)
14787 39D0      MOV A,R36
14788 39D0      MOV ROE,B
14789 39D1      SUB X02,B
14790 39D2      TRAP-10
14791 39D3      LDA #6100(B)
14792 39D4      CMP R37,A
14793 39D5      JNZ/JNE AD ;TO 3998 (LOOP)
14794 39D6      LDA #6101(B)
14795 39D7      CMP R36,A
14796 39D8      JNZ/JNE A4 ;TO 3998 (LOOP)
14797 39D9      LDA #6212
14798 39E0      CMP R37,A
14799 39E1      JNZ/JNE 9F ;TO 3998 (LOOP)
14800 39E2      LDA #6213
14801 39E3      CMP R36,A
14802 39E4      JNZ/JNE 98 ;TO 3998 (LOOP)
14803 39E5      MOV ROF,B
14804 39E6      TRAP-10
14805 39E7      LDA #6248
14806 39E8      CMP R00,R16
14807 39E9      JNZ/JNE 25 ;TO 3A30
14808 39E9      LDA #6109(B)
14809 39E9      CMPA #624C ;DIRECT COMPARISON
14810 39E9      JNZ/JNE 19 ;TO 3A2C
14811 39E9      LDA #610A(B)
14812 39E9      CMPA #624D ;DIRECT COMPARISON
14813 39E9      JNZ/JNE 11 ;TO 3A2C
14814 39E9      LDA #610B(B)
14815 39E9      CMPA #624E ;DIRECT COMPARISON
14816 39E9      JNZ/JNE 09 ;TO 3A2C
14817 39E9      LDA #610C(B)
14818 39E9      CMPA #624F ;DIRECT COMPARISON
14819 39E9      BR #FAB2 ;GO TO SUB3AB2
14820 39E9      CLR A ;A=0
14821 39E9      STA #624B
14822 39E9      STA #6251
14823 39E9      XOR R15,A
14824 39E9      BTJD #60,A,ZB ;TO 3A63
14825 39E9      LDA #6252
14826 39E9      JZ/JEQ 26 ;TO 3A63
14827 39E9      MOV R16,A
14828 39E9      STA #624B
14829 39E9      LDA #6109(B)
14830 39E9      STA #624C
14831 39E9      LDA #610A(B)
14832 39E9      STA #624D
14833 39E9      LDA #610B(B)
14834 39E9      STA #624E
14835 39E9      LDA #610C(B)
14836 39E9      STA #624F
14837 39E9      CLR A ;A=0
14838 39E9      STA #6252
14839 39E9      STA #6250
14840 39E9      JMF 4F ;JUMP TO 3AB2 (EXPAND THIS LOOP)
14841 39E9      LDA #6113(B)
14842 39E9      BTJD #X0,A,09 ;TO 3A72
14843 39E9      CLR A ;A=0
14844 39E9      STA #6142(B)
14845 39E9      JMF 27 ;JUMP TO 3AB2 (EXPAND LOOP)
14846 39E9      BR #F998 ;GOTO LOOP3998 (CONTINUE THIS LOOP)
14847 39E9      LDA #6119(B)
14848 39E9      CMPA #6142(B)
14849 39E9      JNZ/JNE FB ;TO 3A6F (LOOP)
14850 39E9      LDA #6114(B)
14851 39E9      MOV A,R10
14852 39E9      LDA #6141(B)
14853 39E9      XOR R10,A
14854 39E9      BTJD #X0,A,E8 ;TO 3A6F (LOOP)
14855 39E9      LDA #6143(B)
14856 39E9      INC A
14857 39E9      JNZ/JNE E2 ;TO 3A6F (LOOP)
14858 39E9      MOV X01,P10
14859 39E9      LDA #6144(B)
14860 39E9      INC A
14861 39E9      JNZ/JNE D9 ;TO 3A6F (LOOP)
14862 39E9      MOV B,R37
14863 39E9      MOV X07,B
14864 39E9      XCHB R37
14865 39E9      LDA #610B(B)
14866 39E9      MOV A,R36
14867 39E9      DEC B
14868 39E9      XCHB R37
14869 39E9      LDA #611FF(B)
14870 39E9      BTJD #R36,A,0D ;TO 3AB7
14871 39E9      DUNZ B,EE ;TO 3A9A (LOOP)
14872 39E9      MOV X02,P10
14873 39E9      BR #F998 ;GOTO LOOP3998
14874 39E9      LDA #6254
14875 39E9      CMPA #6253 ;DIRECT COMPARISON
14876 39E9      JZ/JEQ 02 ;TO 3AC4 (EXPAND LOOP)
14877 39E9      JC/JB EB ;TO 3AAF (LOOP)
14878 39E9      MOV X04,P10
14879 39E9      MOV XFF,P10
14880 39E9      CMP R17,ROE
14881 39E9      JZ/JEQ 32 ;TO 3B00
14882 39E9      MOV XFF,P17
14883 39E9      MOV X00,A
14884 39E9      TRAP-6
14885 39E9      MOV ROE,B
14886 39E9      SUB X02,B
14887 39E9      TRAP-10
14888 39E9      ADD X03,B

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15068 3ADC      MOVD %60FF(B),R35;+++++  

15072 3AE0      MOV %04,P10  

15075 3AE3      TRAP-7  

15076 3AE4      TRAP-8  

15077 3AE5      MOV %01,A  

15079 3AE7      TRAP-6  

15080 3AE8      TRAP-8  

15081 3AE9      MOV %02,A  

15083 3AEB      TRAP-6  

15084 3AEC      MOVD %6200,R35 ;+++++  

15088 3AF0      MOV %07,P10  

15091 3AF3      TRAP-7  

15092 3AF4      TRAP-8  

15093 3AF5      MOV %03,A  

15095 3AF7      TRAP-6  

15096 3AF8      MOVD %6207,R35 ;+++++  

15100 3AFC      MOV %0B,P10  

15103 3AFF      TRAP-7  

15104 3B00      TRAP-8  

15105 3B01      MOV %04,A  

15107 3B03      TRAP-6  

15108 3B04      MOV ROF,B  

15110 3B06      TRAP-10  

15111 3B07      MOVD %6102(B),R35;+++++  

15115 3B08      MOV %12,P10  

15118 3B0E      TRAP-7  

15119 3B0F      CLR R1B      ;R1B=0  

15121 3B11      LDA #6224  

15124 3B14      JZ/JEQ 10    ;TO 3B26  

15126 3B16      LDA #6250  

15129 3B19      JNZ/JNE 0B    ;TO 3B26  

15131 3B1B      CALL #DA3F    ;GOSUB SUB1A3F  

15134 3B1E      CALL #DA39    ;GOSUB SUB1AA9  

15137 3B21      MOV %FF,A  

15139 3B23      STA #6250  

15142 3B26      TRAP-8  

15143 3B27      MOV %07,A  

15145 3B29      TRAP-6  

15146 3B2A      CLR B       ;B=0  

15147 3B2B      STA #623A(B) ;LOADS A FROM WEIRD MEM LOC (GET SER. NUMBER AGAIN)  

15148 3B2C      INC B  

15152 3B30      CMP %0C,B    ;B0 THRU IT 12 TIMES  

15154 3B32      JNZ/JNE F7    ;TO 3B2B (LOOP)  

15156 3B34      CMP R17,ROE  

15157 3B37      JZ/JEQ 02    ;TO 3B3B  

15161 3B39      TRAP-8  

15162 3B3A      TRAP-8  

15163 3B3B      MOV ROE,R17  

15166 3B3E      LDA #DE06  

15169 3B41      STA #6229  

15172 3B44      LDA #DE07  

15175 3B47      STA #622A  

15178 3B4A      JMP 0B      ;JUMP TO 3B57  

15180 3B4C      LOOP3B4C   CMP %04,R13  

15183 3B4F      JZ/JEQ 06    ;JUMP TO 3B57  

15185 3B51      DEC R1C  

15187 3B53      JZ/JEQ 43    ;TO 3B98 (CONTINUE THIS LOOP)  

15189 3B55      JMP 03      ;JUMP TO 3B5A  

15191 3B57      MOV %05,P1C  

15194 3B5A      LDA #6254  

15197 3B5D      CMPA #6253  

15200 3B60      JZ/JEQ 02    ;TO 3B64  

15202 3B62      JC/JS 34    ;TO 3B9B (EXPAND THIS LOOP)  

15204 3B64      LDA #6224  

15207 3B67      JNZ/JNE 32    ;TO 3B9B (EXPAND THIS LOOP)  

15209 3B69      MOV R1D,A    ;R1D CONTAINS THE AUTH CODE*****  

15211 3B6B      JZ/JEQ 2B    ;TO 3B98 (CONTINUE THIS LOOP)  

15213 3B6D      MOV ROF,B  

15215 3B6F      TRAP-10  

15216 3B70      LDA #6113(B)  

15219 3B73      BTJZ %R20,A,06 ;TO 3B7C  

15222 3B76      LDA #6144(B)  

15225 3B79      INC A  

15226 3B7A      JNZ/JNE 1C    ;TO 3B98 (CONTINUE THIS LOOP)  

15228 3B7C      MOV B,R37  

15230 3B7E      MOV ROE,B  

15232 3B80      TRAP-10  

15233 3B81      MOV %07,P10  

15236 3B84      LDA #6100(B)  

15239 3B87      MOV A,R36  

15241 3B89      INC B  

15242 3B8A      XCHB R37  

15244 3B8C      LDA #6102(B)  

15247 3B8F      INC B  

15248 3B90      XCHB R37  

15250 3B92      BTJO R36,A,06 ;TO 3B9B (EXPAND THIS LOOP)  

15253 3B95      DJNZ R10,EC    ;TO 3B84 (LOOP)  

15256 3B98      BR #F998    ;GOTO LOOP3B98  

15259 3B9B      MOV ROF,B  

15261 3B9D      TRAP-10  

15262 3B9E      MOV R06,R37  

15265 3BA1      AND XE3,R37  

15268 3BA4      LDA #6113(B)  

15271 3BA7      BTJZ %R40,A,0C ;TO 3B86  

15274 3BA9      DR %04,R37  

15277 3BAD      LDA #6278  

15280 3BBO      BTJZ %R01,A,03 ;TO 3B86  

15283 3BB3      XOR %0C,R37  

15286 3BB6      MOV R37,R06  

15288 3BB9      LDA #6232  

15292 3BBC      CMPA #6118(B)  

15295 3BBF      JN/JLT 25    ;TO 3B86 (EXPAND THIS LOOP)  

15297 3BC1      JNZ/JNE 12    ;TO 3B85 (CONTINUE THIS LOOP)  

15299 3BC3      LDA #6231  

15302 3BC6      CMPA #6117(B)  

15305 3BC9      JNC/JL 1B    ;TO 3B86 (EXPAND THIS LOOP)  

15307 3BCB      JNZ/JNE 0B    ;TO 3B85 (CONTINUE THIS LOOP)  

15309 3BCD      LDA #6230  

15312 3BDD      CMPA #6116(B)  

15315 3BD3      JNC/JL 11    ;TO 3B86 (EXPAND THIS LOOP)  

15317 3BDB      LDA #6114(B)  

15320 3BDB      RL A  

15321 3BDB      ADD %40,A  

15323 3BDB      RR A  

15324 3BDC      STA #622D  

15327 3BDF      MOV A,R15  

15329 3BE1      CLR R1E  

15331 3BE3      BR #F79F    ;GOTO LOOP379F  

15334 3BE6      LDA #6229  

15337 3BE9      INC A  

15338 3BEA      STA #6229  

15341 3BED      JNZ/JNE 0C    ;TO 3BFB  

15343 3BEF      LDA #622A  

15346 3BF2      INC A  

15347 3BF3      STA #622A  

15350 3BF6      JNZ/JNE 03    ;TO 3BFB  

15352 3BF8      CALL #DA3F    ;GOSUB SUB1A3F  

15355 3BF8      MOV %05,A  

15357 3BFD      TRAP-6  

15358 3BFE      MOVD %6230,R35 ;+++++

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15342 3C02      MOV X03,P10
15345 3C05      TRAP-7
15346 3C06      TRAP-8
15347 3C07      BR #FB4C      ;GOTO LOOP3B4C
15370 3C0A      MOV ROE,B
15372 3C0C      TRAP-10
15373 3C0D      MOV X16,A
15375 3C0F      ADD R00,B
15377 3C11      MOV R00,B
15379 3C13      MOV A,B
15380 3C14      XCHB R37
15382 3C16      LDA #60FE(B)
15385 3C19      DEC B
15386 3C1A      XCHB R37
15388 3C1C      STA #61FE(B)
15391 3C1F      DJNZ B,F3      ;TO 3C14 (LOOP)
15393 3C21      RETB      ;<-----<<<
15374 3C22      SUB3C22
15396 3C24      MOV X05,B
15378 3C26      STA #6255(B)
15401 3C29      DJNZ B,FB      ;TO 3C26 (LOOP)
15403 3C2B      MOV ROF,B
15405 3C2D      TRAP-10
15406 3C2E      LDA #6116(B)
15409 3C31      MOV A,R3B
15411 3C33      LDA #6117(B)
15414 3C36      MOV A,R3A
15416 3C38      LDA #6118(B)
15419 3C3B      MOV A,R3E
15421 3C3D      LDA #6232
15424 3C40      MOV A,R3D
15426 3C42      LDA #6231
15429 3C45      MOV A,B
15430 3C46      LDA #6230
15433 3C49      SUB R00,R3B
15436 3C4C      SBB R01,R3A
15439 3C4F      SBB R3D,R3E
15442 3C52      JC/J8 01
15444 3C54      RETB      ;TO 3C55 (OVER RETS)
15445 3C55      ;<-----<<<
15447 3C57      MOV X03,B
15449 3C59      MOV X1F,A
15450 3C5A      INC A
15453 3C5D      SUB X80,R3B
15456 3C60      SBB X1E,R3A
15459 3C63      SBB X04,R3E
15461 3C65      JNC/JL 05
15463 3C67      DJNZ B,F2      ;TO 3C59 (LOOP)
15466 3C6A      BR #FC05      ;GOTO SUB3C05
15469 3C6D      ADD X80,R3B
15472 3C70      ADC X1E,R3A
15475 3C73      ADC X04,R3E
15478 3C76      MOV X1F,A
15480 3C78      INC A
15481 3C79      SUB X78,R3B
15484 3C7C      SBB X69,R3A
15487 3C7F      SBB X00,R3E
15490 3C82      JC/J8 F4      ;TO 3C78 (LOOP)
15492 3C84      STA #6257      ;FROM 3B95
15495 3C87      ADD X78,R3B
15498 3C8A      ADC X69,R3A
15501 3C8D      MOV X1F,A
15503 3CBF      INC A
15504 3C90      SUB X94,R3B
15507 3C93      SBB X11,R3A
15510 3C96      JC/J8 F7      ;TO 3CBF (LOOP)
15512 3C98      STA #6258
15515 3C9B      ADD X94,R3B
15518 3C9E      ADC X11,R3A
15521 3CA1      MOV X1F,A
15523 3CA3      INC A
15524 3CA4      SUB X02,R3B
15527 3CA7      SBB X01,R3A
15530 3CAA      JC/J8 F7      ;TO 3CA3 (LOOP)
15532 3CAC      STA #6259
15535 3CAF      ADD X02,R3B
15538 3CB2      ADC X01,R3A
15541 3CB5      MOV X1F,A
15543 3CB7      INC A
15544 3CB8      SUB X48,R3B
15547 3CBB      SBB X00,R3A
15550 3CBE      JC/J8 F7      ;TO 3CB7 (LOOP)
15552 3CC0      STA #625A
15555 3CC3      ADD X48,R3B
15558 3CC6      ADD R3B,R3B
15561 3CC9      MOV X1F,A
15563 3CCB      INC A
15564 3CCC      SUB X0F,R3B
15567 3CCF      JC/J8 FA      ;TO 3CCB (LOOP)
15569 3CD1      STA #625B
15572 3CD4      RETB      ;<-----<<<
15573 3CD5      SUB3C05
15575 3CD7      MOV X22,A
15578 3CDA      STA #6256
15580 3CDC      MOV X29,A
15583 3CDF      STA #6257
15586 3CE2      STA #6258
15587 3CE5      MOV X25,A
15591 3CE7      STA #6259
15594 3CEA      STA #625A
15597 3CED      RETB      ;<-----<<<
15598 3CEE      SUB3CEE
15599 3CEF      PUSH B      ;<-----<<<
15602 3CF2      MOVD XEB87,R35      ;+++++*****+++++*****+++++*****+
15606 3CF6      MOV R25,A
15608 3CF8      XOR R15,A
15610 3CFA      BTJO X60,A,04      ;TO 3D01
15613 3CFF      MOVD XEB88,R35      ;+++++*****+++++*****+++++*****+
15617 3D01      CALL #C31D      ;GOSUB 31D
15620 3D04      POP B
15621 3D05      ADD X0C,B
15623 3D07      LDA #6256
15626 3D0A      CMP X20,A
15628 3D0C      JZ/JEQ 0A      ;TO 3D18
15630 3D0E      TRAP-12
15631 3D0F      LDA #6257
15634 3D12      TRAP-13
15635 3D13      LDA #6258
15638 3D16      JMP 17      ;JUMP TO 3D2F
15640 3D18      LDA #6257
15643 3D1B      CMP X20,A
15645 3D1D      JNZ/JNE 0F      ;TO 3D2E
15647 3D1F      MOV X2E,A
15649 3D21      TRAP-12
15650 3D22      TRAP-13
15651 3D23      LDA #6258
15654 3D26      CMP X20,A
15656 3D28      JNZ/JNE 0B      ;TO 3D35
15658 3D2A      MOV X2E,A
15660 3D2C      JMP 07      ;JUMP TO 3D35
15662 3D2E      TRAP-12

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15663	3D2F	MOV X1D,A
15665	3D31	TRAP-13
15666	3D32	LDA #6258
15669	3D35	TRAP-13
15670	3D36	LDA #6259
15673	3D39	TRAP-13
15674	3D3A	MOV X1D,A
15676	3D3C	TRAP-13
15677	3D3D	LDA #625A
15680	3D40	TRAP-13
15681	3D41	LDA #625B
15684	3D44	TRAP-13
15685	3D45	LDA #6256
15688	3D48	CMP X20,A
15690	3D4A	JNZ/JNE 03 ; TO 3D4F
15692	3D4C	MOV X2E,A
15694	3D4E	TRAP-13
15695	3D4F	RETS ;<-----<<<

FROM 3D50 TO 3FCF ARE NOTHING BUT FF (BLANKS IN EPROM).

16336	3FD0	Trap 23 Address = DA33
16338	3FD2	Trap 22 Address = DBF6
16340	3FD4	Trap 21 Address = D174
16342	3FD6	Trap 20 Address = F95F
16344	3FD8	Trap 19 Address = F987
16346	3FDA	Trap 18 Address = C3D9
16348	3FDC	Trap 17 Address = C392
16350	3FDE	Trap 16 Address = F0AF
16352	3FE0	Trap 15 Address = F0A3
16354	3FE2	Trap 14 Address = F138
16356	3FE4	Trap 13 Address = F0BE
16358	3FE6	Trap 12 Address = F07F
16360	3FE8	Trap 11 Address = F04F
16362	3FEA	Trap 10 Address = F42C
16364	3FEC	Trap 9 Address = F7D6
16366	3FEE	Trap 8 Address = FB42
16368	3FF0	Trap 7 Address = F071
16370	3FF2	Trap 6 Address = F02C
16372	3FF4	Trap 5 Address = F138
16374	3FF6	Trap 4 Address = FB4B
16376	3FF8	Trap 3 Address = FAD9
16378	3FFA	Trap 2 Address = F138
16380	3FFC	Trap 1 Address = F443
16382	3FFE	Trap 0 Address = F0E3

